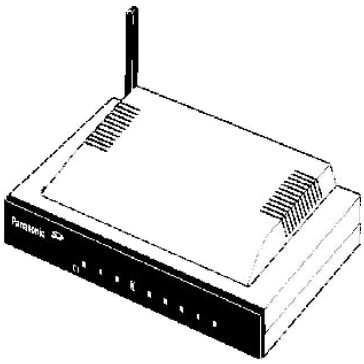
ORDER NO. KMS0505067CE
F5

Service Manual

Wireless Camera Monitoring System

BL-WV10A
(for U.S.A.)



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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service

IMPORTANT INFORMATION ABOUT LEAD FREE, (PbF), SOLDERING
If lead free solder was used in the manufacture of this product the printed circuit boards will be marked PbF.
Standard leaded, (Pb), solder can be used as usual on boards without the PbF mark.
When this mark does appear please read and follow the special instructions described in this manual on the use of PbF and how it might be permissible to use Pb solder during service and repair work.

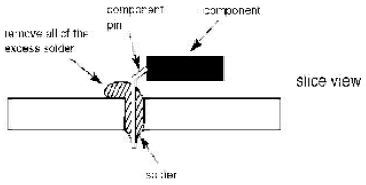
1. ABOUT LEAD FREE SOLDER (PbF: Pb free)

Note:
In the information below, Pb, the symbol for lead in the periodic table of elements, will refer to standard solder or solder that contains lead.

We will use PbF solder when discussing the lead free solder used in our manufacturing process which is made from Tin, (Sn), Silver, (Ag), and Copper, (Cu).
This model, and others like it, manufactured using lead free solder will have PbF stamped on the PCB. For service and repair work we suggest using the same type of solder although, with some precautions, standard Pb solder can also be used.

Caution

- **PbF solder has a melting point that is 50° ~ 70° F, (30° ~ 40°C) higher than Pb solder. Please use a soldering iron with temperature control and adjust it to 700° ± 20° F, (370° ± 10°C). In case of using high temperature soldering iron, please be careful not to heat too long.**
- **PbF solder will tend to splash if it is heated much higher than its melting point, approximately 1100°F, (600°C).**
- **If you must use Pb solder on a PCB manufactured using PbF solder, remove as much of the original PbF solder as possible and be sure that any remaining is melted prior to applying the Pb solder.**
- **When applying PbF solder to double layered boards, please check the component side for excess which may flow onto the opposite side (See figure, below).**

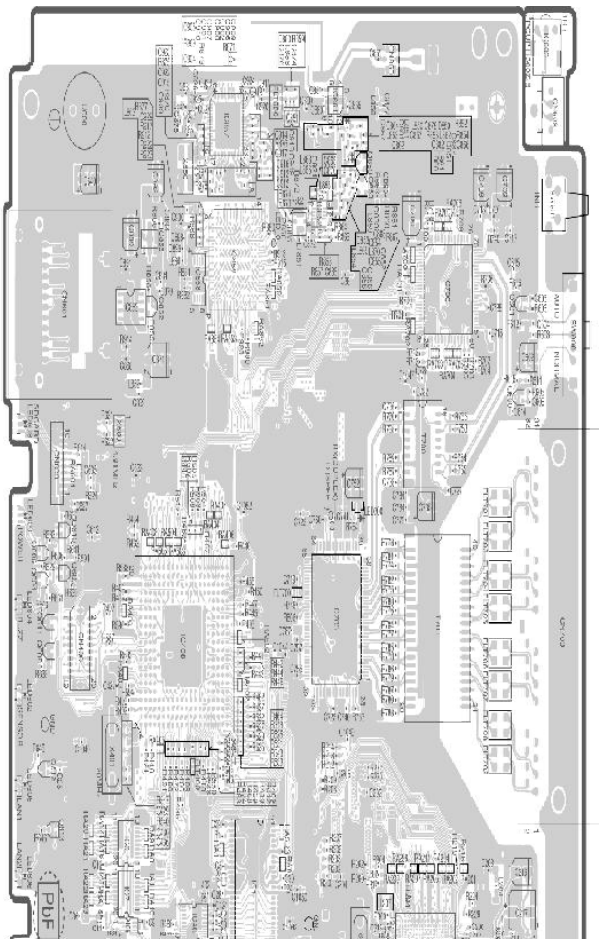


1.1. SUGGESTED PbF SOLDER

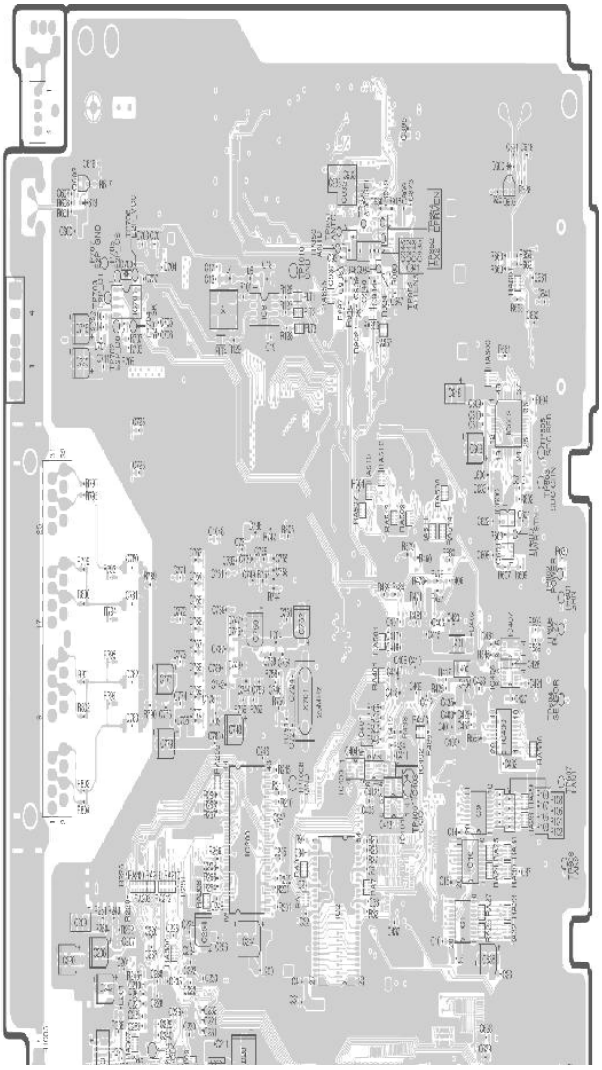
There are several types of PbF solder available commercially. While this product is manufactured using Tin, Silver, and Copper, (Sn+Ag+Cu), you can also use Tin and Copper, (Sn+Cu), or Tin, Zinc, and Bismuth, (Sn+Zn+Bi). Please check the manufacturer's specific instructions for the melting points of their products and any precautions for using their product with other materials. The following lead free (PbF) solder wire gauge are recommended for service of this product: 0.3mm, 0.6mm and 1.0mm.

1.2. HOW TO RECOGNIZE THAT Pb FREE SOLDER IS USED

COMPONENT VIEW



BOTTOM VIEW



2. FOR SERVICE TECHNICIANS

ICs and LSIs are vulnerable to static electricity.
When replacing, the following precautions will help to prevent recurring malfunctions.

1. Cover the plastic parts with aluminum foil.

2. Ground the soldering irons.

3. Use a conductive mat on the work-table.

4. Do not grasp IC or LSI pins with bare fingers.

3. CAUTION

3.1. SAFETY PRECAUTIONS

1. Before servicing, unplug the power cord to prevent an electrical shock.
2. When replacing parts, use only manufacturer's recommended components for safety.
3. Check the condition of power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc.
5. Before returning the serviced equipment to the customer, make the following insulation resistance test to prevent a shock hazard.

3.2. CAUTION

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type recommended by the manufacturer.
Dispose of used batteries accoding to the manufacturer's Instructions.

3.3. TRADEMARKS

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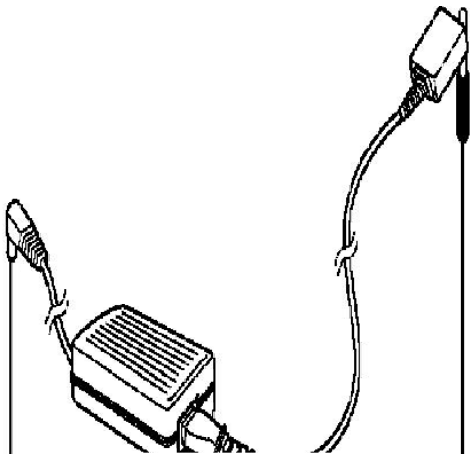
3.4. INSULATION RESISTANCE TEST

1. **Unplug the AC power cord and short the two prongs of the plug with a jumper wire.**
2. **Measure the resistance value with ohmmeter between the jumpered AC plug and each exposed metal cabinet part, such as screw threads, etc.**

Note:
Some exposed parts may be isolated from the chassis by design. These will read infinity.

3. **If the measurement is outside the specified limits, there is a possibility of shock hazard. The equipment should be repaired and rechecked before it is returned to the customer.**



3.5. POWER CAUTION

The power socket wall outlet should be located near this equipment and be easily accessible.

4. SPECIFICATIONS

Main Unit:

LAN Interface	

Items	Specifications
Number of ports	4 port
Connector type	8-pin modular jack (RJ-45)
Physical interface	IEEE802.3 (10BASE-T) IEEE802.3u (100BASE-TX) MDI/MDI-X with auto-detect

Wireless Interface

Items	Specifications
IEEE802.11g	
Transmission protocol	OFDM (IEEE802.11g standard)/DS-SS (IEEE802.11b compatible), half duplex
Transmission speed ([standard value] Mbps)	54/48/36/24/18/12/9/6 *(IEEE802.11g standard): automatic fallback
Frequency range (MHz)	2412 to 2462 (center frequencies)
Number of channels	11
IEEE802.11b	
Transmission protocol	DS-SS, half duplex
Transmission speed ([standard value] Mbps)	11/5.5/2/1 *(IEEE802.11b standard): (automatic fallback)
Frequency range (MHz)	2412 to 2462 (center frequencies)
Number of channels	11
Communication range	The range will depend on environmental conditions. The proximity of reinforced concrete structures, large metal objects, microwave ranges, and/or theft prevention devices can shorten the range. Obstructions (walls, furniture, equipment) can also shorten the usable range.

- The values displayed represent the theoretical maximums for wireless LAN standards, and do not represent actual data transmission speeds.

Video Output

Items	Specifications
Video format	NTSC
Output jack	Single jack
Output level	1.0 Vp-p (75)

User Interface

Items	Specifications
FACTORY DEFAULT RESET button	Restoration of default settings
Mode switch	Normal, Setup, Sequential Display
ALERT	Camera sensor notification
Indicator displays	Power (green/orange/red), Sensor (orange), ALERT (green), SD Memory Card (green/orange), Wireless (green), LAN 1 through LAN 4 (green)
Recording media	SD Memory Card

Other

Items	Specifications
AC adapter	AC110 V (60Hz) DC12 V (part number PQLV202Y) DC cord length: About 3.0 m (10 ft.) AC cord length: About 1.8 m (separate) Power consumption: 7.5 W
Antenna	Diversity antenna
Exterior dimensions	W x H x D: About 220 mm x 42 mm x 171 mm (8.6 in. x 1.6 in. x 6.7 in.) with antenna collapsed and no stand
Weight (Main Unit Only)	About 500 g (1.1 lb)
Operational environment	0°C~40 °C (32°F~104 °F) humidity between 20 and 85% (without condensation)
EM radiation shielding	FCC Part 15

Software:

Camera Viewer

Items	Specifications
Camera image display	Displays a maximum of eight camera images Video (motion JPEG): 640x480, 320x240 1 screen per 8 pages, 4 screens per 2 pages Camera pan/tilt operations, image size switching, resolution switching
Recording to and playing from SD memory cards	Movies (motion JPEG): 640 x 480, 320 x 240 Saved in QuickTime format Pictures (JPEG): 640 x 480, 320 x 240 Timer recording
Camera motion sensor support	Automatic switch to camera image at sensor input event sensor input triggers buzzer/LED notification Automated camera image recording at sensor input event

Setup

Items	Specifications
Quick Setup	Automatically performs necessary network and wireless settings for Panasonic cameras and routers

Wireless Terminal Feature

Items	Specifications
Security	WEP (64 bit/128 bit/152 bit), wireless stealth functionality (SSID suppression, connection denial/permissions through ANY key), MAC address filtering

Notice Regarding Wireless Communications

1. To avoid wireless communication interference and instability, do not use this product near the following devices, or change the wireless channel used by the BL-WV10A.

- **Wireless transmitters (radio transmitters, cellular transmitters, etc.)**
- **Wireless devices which operate at 2.4 GHz (security equipment, POS systems, cordless telephones, etc.)**
- **Microwave ovens**

2. Wireless commnication range and quality may be affected if the following types of objects are located between or near this product and other wireless devices connected to this product. In the event that images do not refresh at a regular rate, become cut off, etc., relocate this product, the other wireless devices, or the obstacles (if possible) for more stable wireless communications.

- **Metal door shutters**
- **Walls made of concrete,stone,or brick,or walls which contain aluminiumbased heat insulation**
- **Multiple walls**
- **Fire doors and glass**
- **Steel racks or shelves**

3. Place cameras and this product at least 2 m (6.5 ft.)away from radios.Do not connect cameras and this product to a power outlet used by a radio.

Frame rate

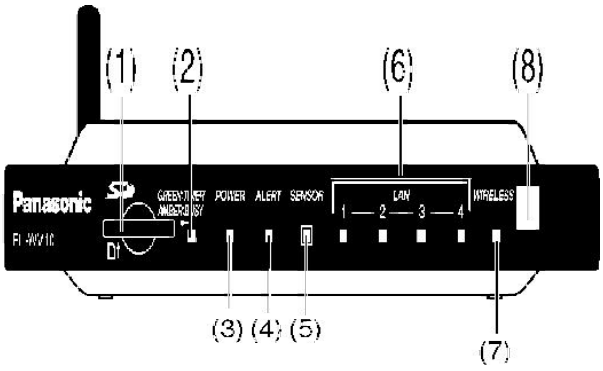
- Frame rate (frames per second,‘‘fps’’)may vary depending on the image being viewed by the camera, brightness, and other environment conditions, as well as network conditions such as distance between the BL-WV10A and the cameras, the number of cameras connected, network traffic, wireless network conditions, etc.

- For BL-C10A and BL-C30A, a maximum of 15 fps in LOW quality (resolution) and 7.5 fps in HIGH quality is possible.
- For HCM series cameras, a maximum of 30 fps in LOW quality and 12 fps in HIGH quality is possible.
- Network speed may decrease while the BL-WV10A is turned on and connected to cameras.
- The display size and brightness of the Monitoring Screen can be adjusted.

5. PARTS LOCATIONS

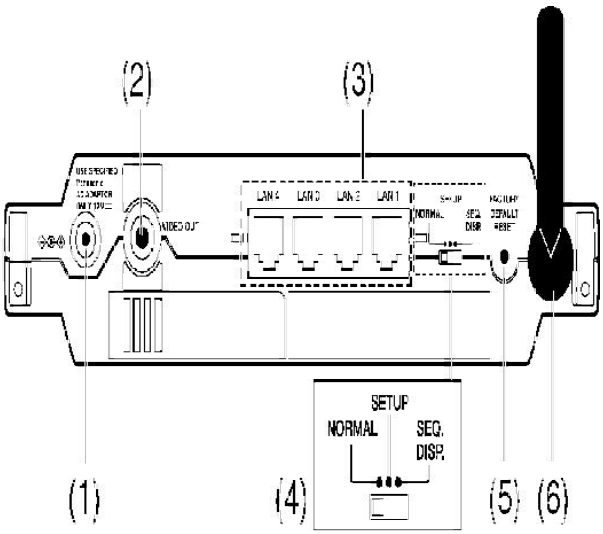
5.1. MAIN UNIT

Front Panel



1. SD Memory Card port
2. Timer/Busy indicator
3. Power indicator
4. Alert indicator
5. Sensor indicator
6. LAN indicators
7. Wireless indicator
8. Remote control sensor

Rear Panel



1. DC IN jack

2. Video output port

3. LAN ports

4. Mode switch

5. FACTORY DEFAULT RESET button

6. Antenna

Indicators

The indicators display the status of the BL-WV10A and network conditions.

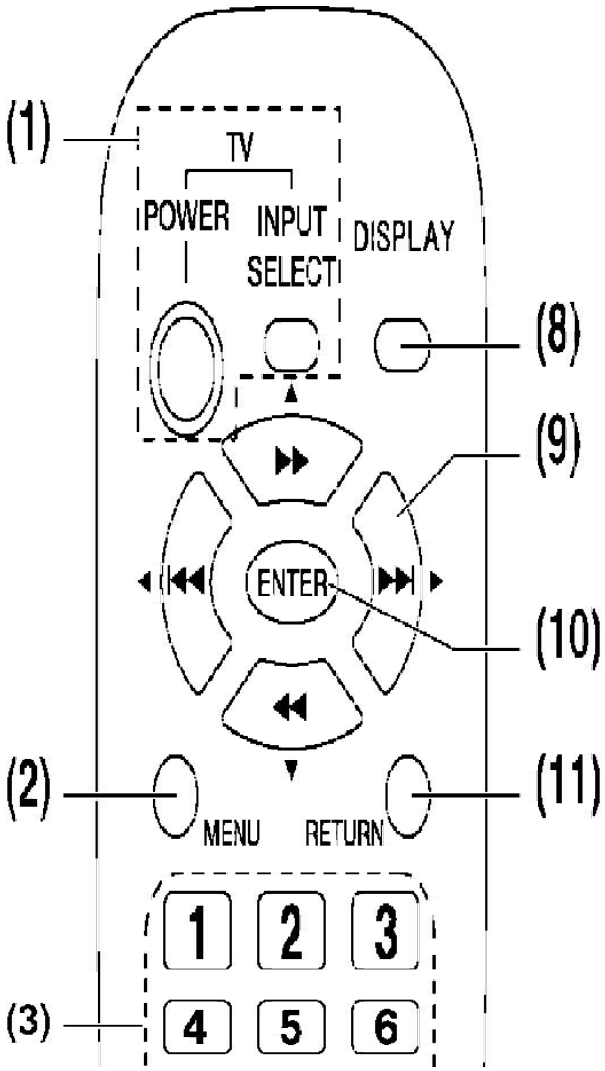
During Quick Setup

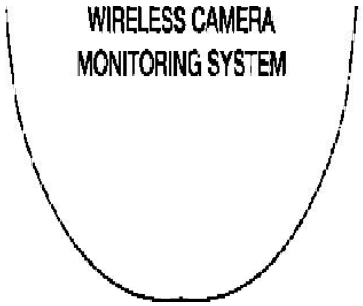
Indicator	Color	Description
Power	Amber (flashing)	Unit is in Quick Setup mode.
Wireless	Green	Quick Setup for a camera is in progress, or Quick Setup has been completed for the BB-HGW700A.
	Green (flashing)	Quick Setup has been completed for a camera.

During Normal Operation

Indicator	Color	Description
Timer/Busy	Green	Timer/Sensor recording has been set. Turn off by pressing [TIMER] on the remote control.
	Green (flashing)	Timer/Sensor recording cannot be turned on due to insufficient free space on the SD memory card. The indicator will flash for about 6 seconds. Also flashes when the timer recording setting is invalid (no SD memory card installed, etc.)
	Off	Timer/Sensor recording is not set. Turn on by pressing [TIMER] on the remote control.
	Amber (flashing)	Data is either being written to or read from the SD memory card.
Power	Green	The unit is turned on.
	Red (flashing)	A problem was detected during the power-on diagnostics.
	Amber (flashing)	Power-on diagnostics are in progress.
ALERT	Green	The buzzer is turned on. Turn off by pressing [ALERT] on the remote control.
	Off	The buzzer is turned off. Turn on by pressing [ALERT] on the remote control.
Sensor	Amber	The sensor is on.
	Orange (flashing)	The indicator will flash every 0.5 seconds when a camera is being detected by the sensor. After detection, the indicator will flash every second. To turn off the indicator.
	Off	The sensor is off.
LAN 1--4	Green	The unit is connected to wired cameras or to a router.
Wireless	Green	The unit is connected to wireless cameras.

5.2. REMOTE CONTROL

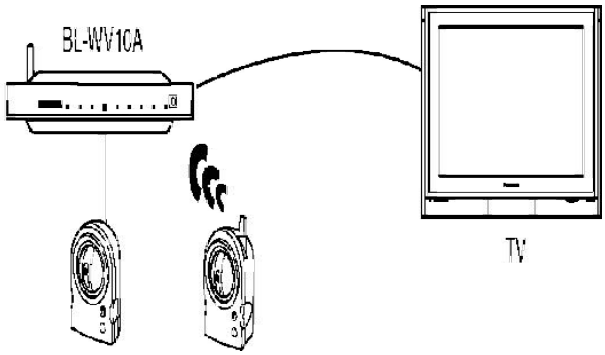

(1)
TV
POWER
INPUT SELECT
DISPLAY
(8)
(9)
ENTER
(10)
(2)
MENU
RETURN
(11)
1
2
3
4
5
6
(3)



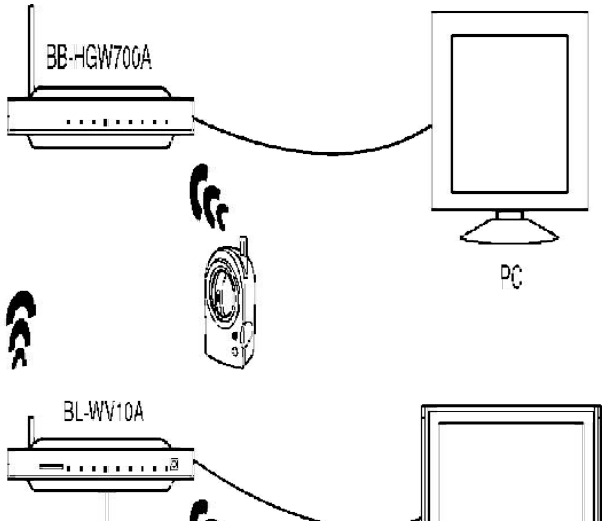
1. **[POWER] and [INPUT]:**
   You can program the remote control to turn your TV on and off when the [POWER] button is pressed, and to change the TV's video input. You must first program your TV's manufacturer code.
2. **[MENU]: Press while monitoring a camera to display the [MENU] screen.**
3. **Number keys: Depending on the current screen, used to enter numbers and text, or aim the camera at a preset position or at the sensor position.**
4. **[TIMER]: Turns the timer on and off.**
5. **[0]: Displays the camera list or switches to multi-camera display mode.**
6. **[STOP]: Stops recording and playback.**
7. **[PLAY/PAUSE]: Starts and pauses movie playback and picture display.**
8. **[DISPLAY]: Toggles through the different image data display modes while monitoring a camera**
9. **Navigator keys: Used to select on-screen items or aim the camera in a different direction.**
10. **[ENTER]: Depending on the current screen, selects the highlighted setting or item, saves the current setting, or aims the camera at the home position.**
11. **[RETURN] Returns to the previous or menu.**
12. **[ALERT]: Turns the alert on and off. The alert can be used to alert you to camera sensor detection.**
13. **[REC]: Press while monitoring a camera to record a movie.**
14. **[SNAPSHOT]: Press while monitoring a camera to take a picture.**

6. HOW TO CONNECT

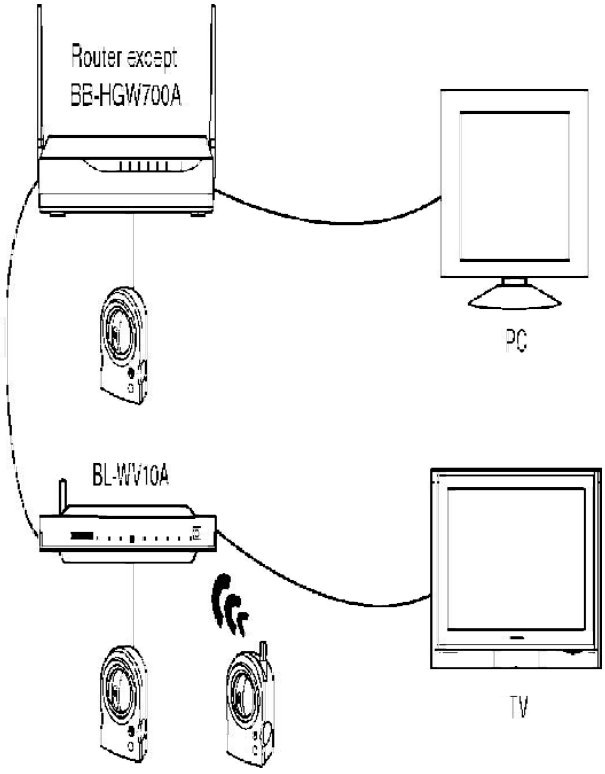
Connecting cameras directry to the BL-WV10A



Connecting to the BB-HGW700A (See Operating Instructions)



Connecting to the router except BB-HGW700A



Note:

- The only wireless router that can be used with the BL-WV10A is the Panasonic BB-HGW700A. All other routers require a wired connection.

7. DISASSEMBLY INSTRUCTIONS

7.1. HOW TO REMOVE BOTTOM CABINET

1. Remove two Screws (A). **2. Remove Bottom Cabinet.**	

7.2. HOW TO REMOVE MAIN BOARD AND ANTENNA

1. Remove five Screws (B). 2. Remove the solder of Antena Cable (two point A and C). 3. Remove Main Board. 4. Remove Antenna.	

8. TROUBLE SHOUTING GUIDE

- Press the Factory default reset button to reset to the original defaults.
- Connect the PC to each LAN1~4 port with the LAN cable.
- Insert the wireless network card (802.11b/g) into the PC.
  (Confirm that the BL-WV10A unit and the wireless network card are placed in such a way that radio waves can travel between them)
- Set up your PC.

8.1. PC SETUP

System requirements

- A notebook PC with a CardBus slot and Windows XP installed as the operating system

A wireless LAN card

- A CardBus wireless LAN card (802.11b/g compatible)

8.1.1. LAN-connected PC

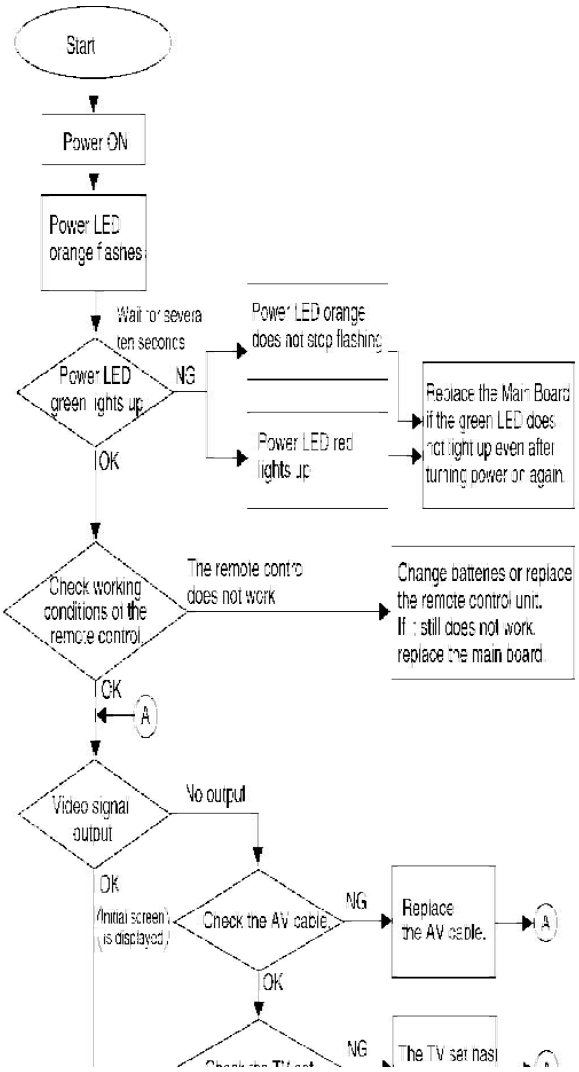
IP address:	192.168.0.1
Net mask:	255.255.255.0
DNS:	Not available
Default gateway:	Not available

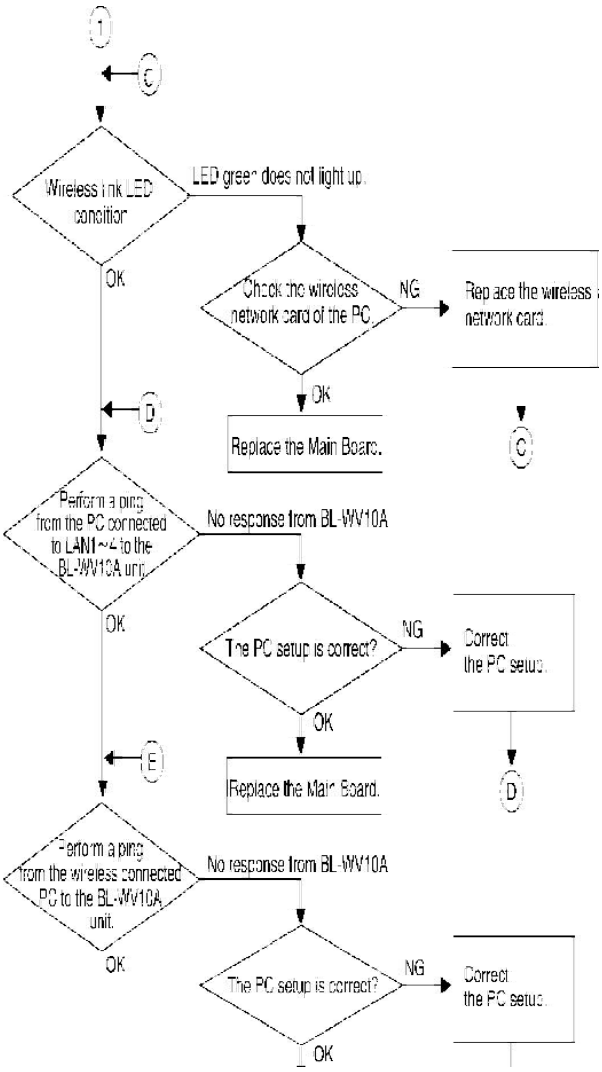
8.1.2. Wireless connected PC

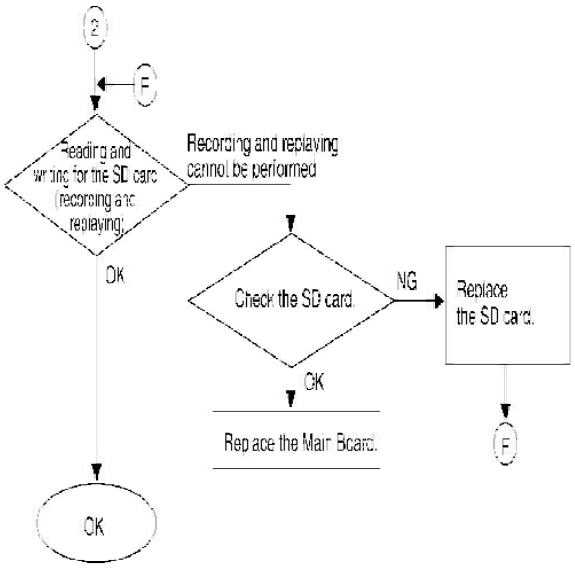
IP address:	192.168.0.2
Net mask:	255.255.255.0
DNS:	Not available
Default gateway:	Not available
SSID:	Refer to the label on the underside of the unit.
128 bit encryption (WEP) key :	Refer to the label on the underside of the unit.
Communicate mode:	Infrastructure

8.1.3. The method of connection for troubleshooting

8.2. TROUBLE SHOOTING FLOW CHART


Start
Power ON
Power LED orange flashes
Wait for several ten seconds
Power LED green lights up
NG
Power LED orange does not stop flashing
Power LED red lights up
Replace the Main Board if the green LED does not light up even after turning power on again.
OK
Check working conditions of the remote control
The remote control does not work
Change batteries or replace the remote control unit. If it still does not work, replace the main board.
OK
A
Video signal output
No output
OK
(Initial screen is displayed.)
Check the AV cable.
NG
Replace the AV cable.
A
OK
NG
The TV set has


1
C
Wireless link LED condition
LED green does not light up.
OK
Check the wireless network card of the PC.
NG
Replace the wireless network card.
OK
Replace the Main Board.
C
D
Perform a ping from the PC connected to LAN1~4 to the BL-WV10A unit.
No response from BL-WV10A
OK
The PC setup is correct?
NG
Correct the PC setup.
OK
Replace the Main Board.
D
E
Perform a ping from the wireless connected PC to the BL-WV10A unit.
No response from BL-WV10A
OK
The PC setup is correct?
NG
Correct the PC setup.
OK



* For performing a ping

Select "Start" menu→"Program"→"MS-DOS prompt".

"C:¥windows> ping 192.168.0.250 <Enter key>"

* When the ping is successful

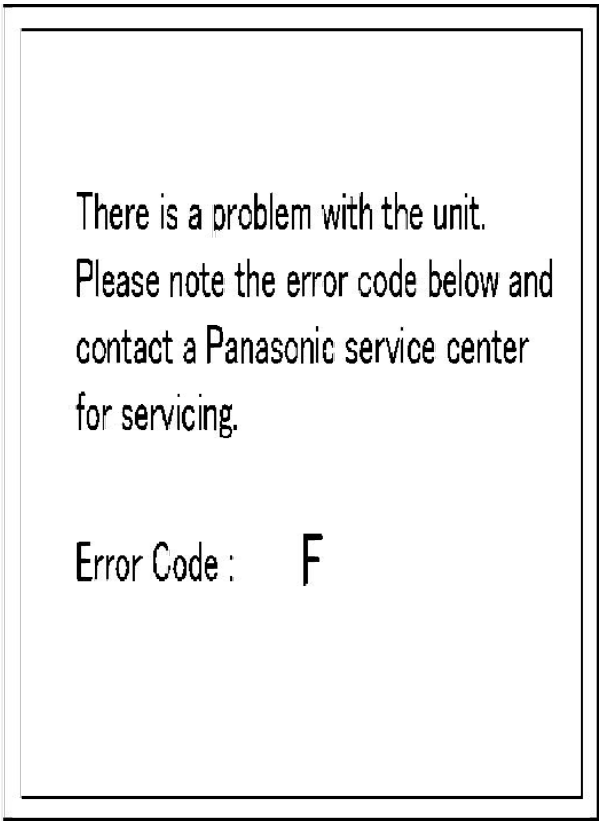
"Reply from 192.168.0.250: byte=32"

* When the ping is not successful

"Request timed out."

8.3. TROUBLE SHOOTING 2

If after turning on the power it does not operate normally, an error code below appears or a alert sounds, the main board should be replaced.

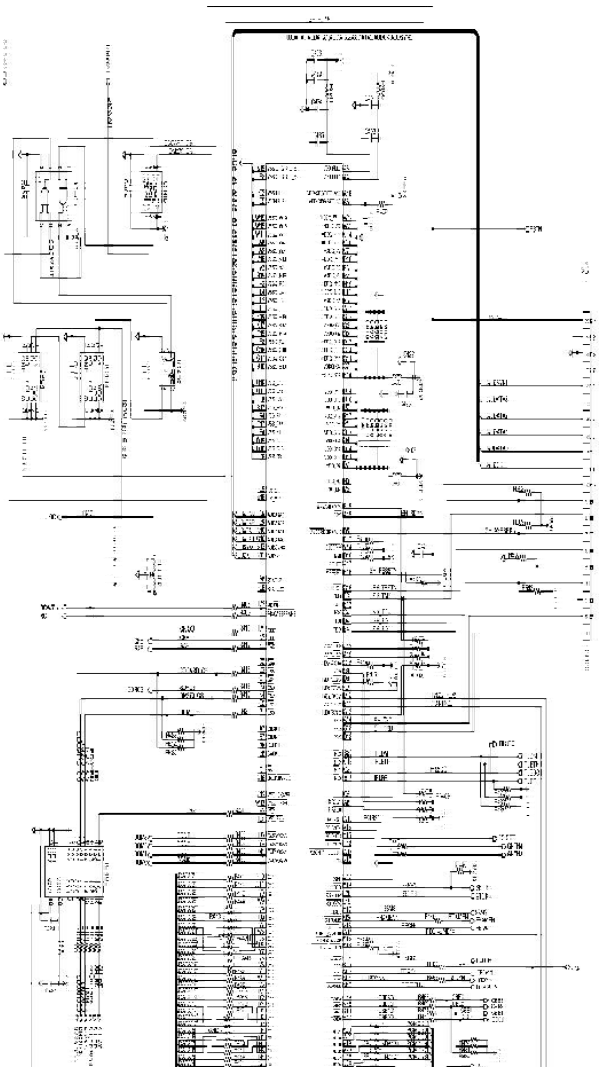

There is a problem with the unit.
Please note the error code below and
contact a Panasonic service center
for servicing.
Error Code : F

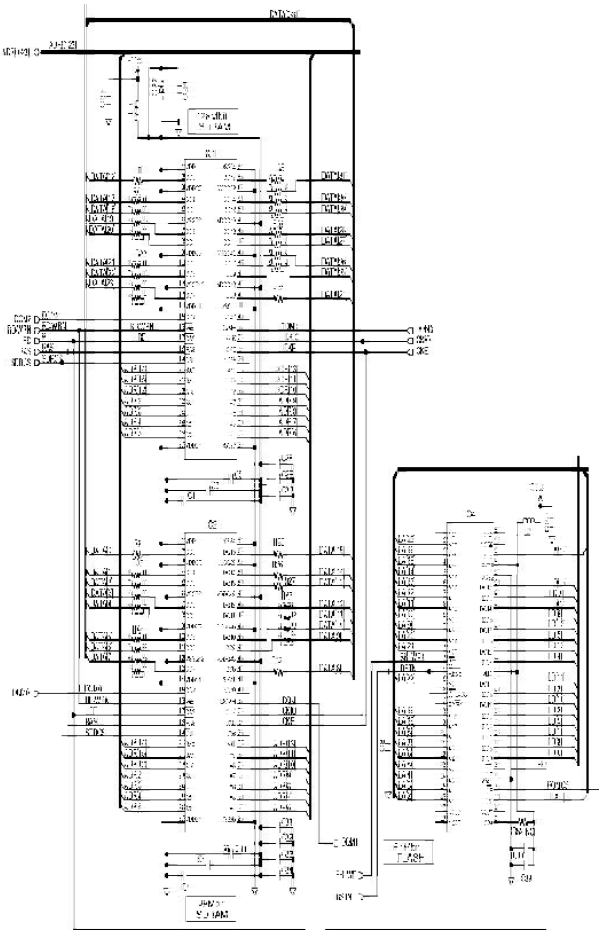
Description of an error	Error code	Number of buzzer sounds	Areas likely to malfunction
SDRAM error	—	3	IC1, IC2 or the peripheral
DM270 error	—	4	IC203 or the peripheral
H8 microprocessor error	F30	—	IC602 or the peripheral
EtherLAN error	F40	5	IC700 or the peripheral
SD error	F50	5	IC606 or the peripheral
System partition error	F91	6	MAC address rewrite
Kernel boot error	F99	6	IC408, IC4 or the peripheral

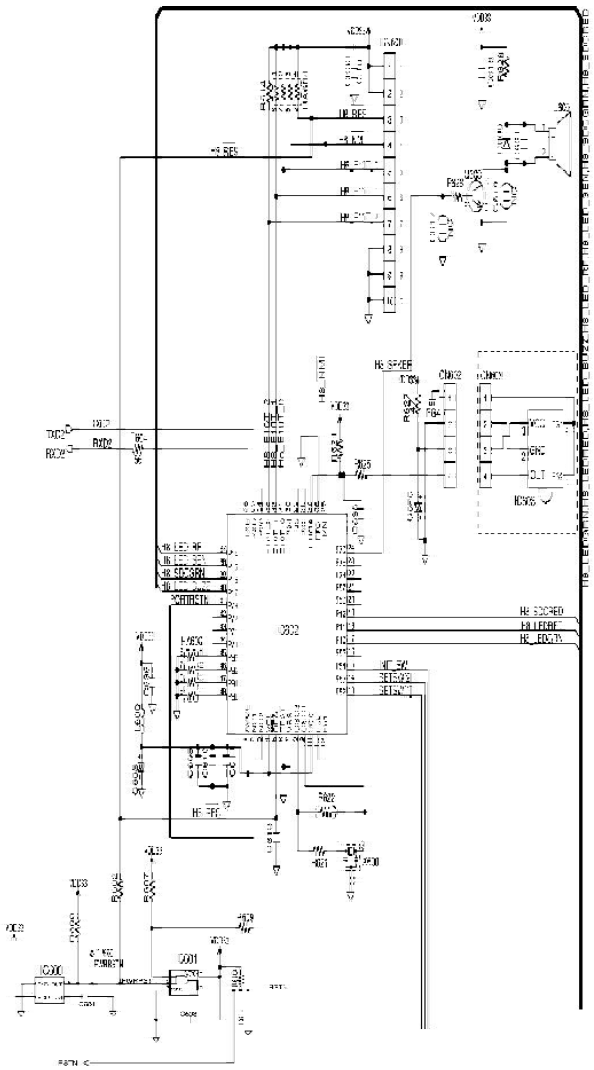
9. CIRCUIT DESCRIPTION

9.1. CPU BLOCK

The main CPU (IC408) has functions such as network control, memory control and PCI control. The programs are stored in the writable Flash ROM (IC4), and SDRAM (IC1, IC2) are used for data processing. The sub CPU (IC602), which connects to the main CPU (IC408) by serial line, has functions of timer control, and performs such as receiving control, LED control, buzzer control and WDT control.

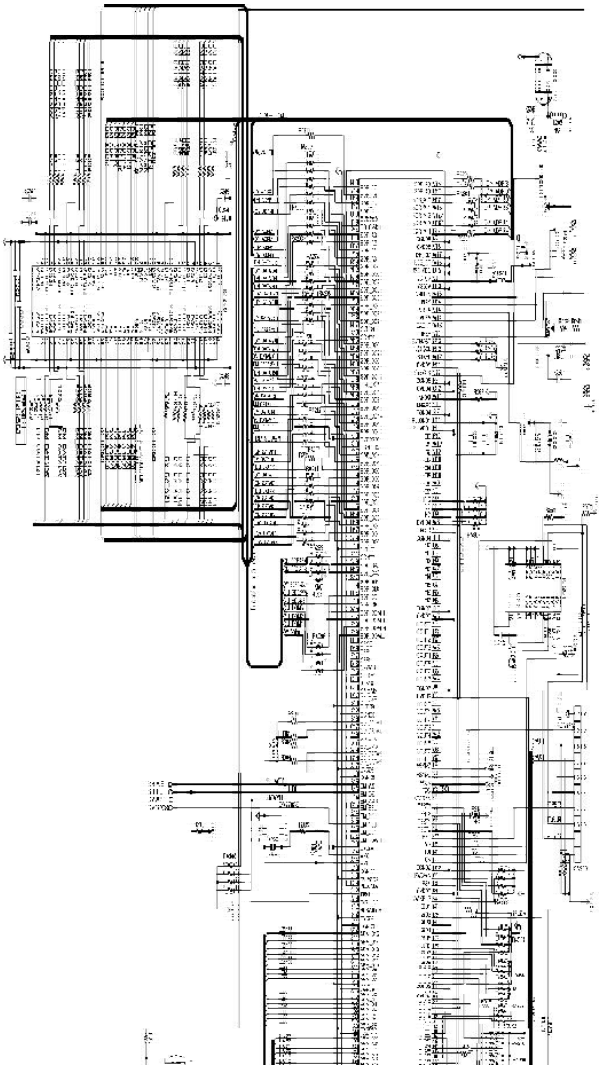






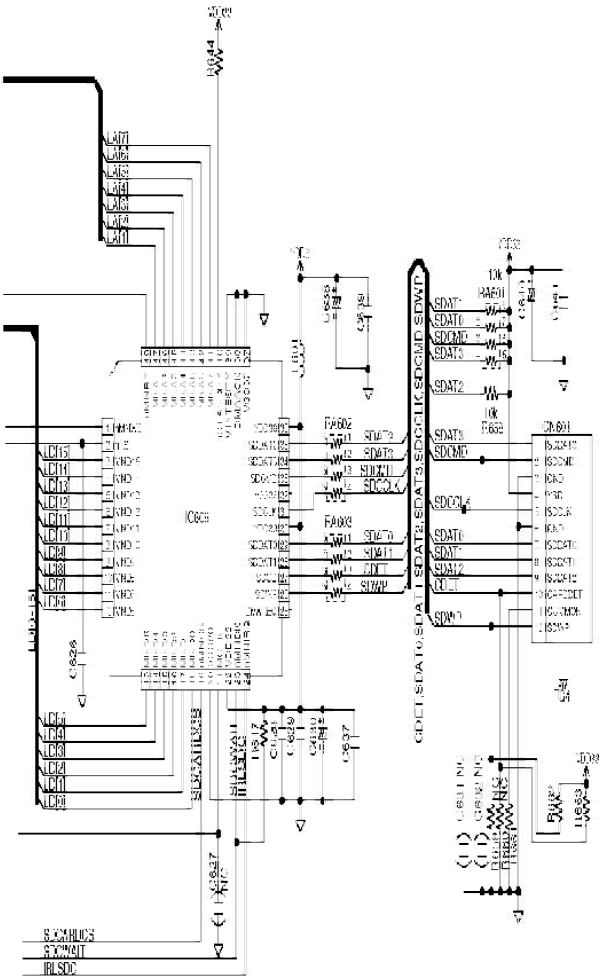
9.2. DSP BLOCK

DSP (IC203), which connects to the main CPU (IC408) through a bus, has functions of image data encoding/decoding and video output. SDRAM (IC200) is used as a video memory. The DSP produces the output of the encoded NTSC signal to the RCA connector (CN201) through the amplifier (IC202).



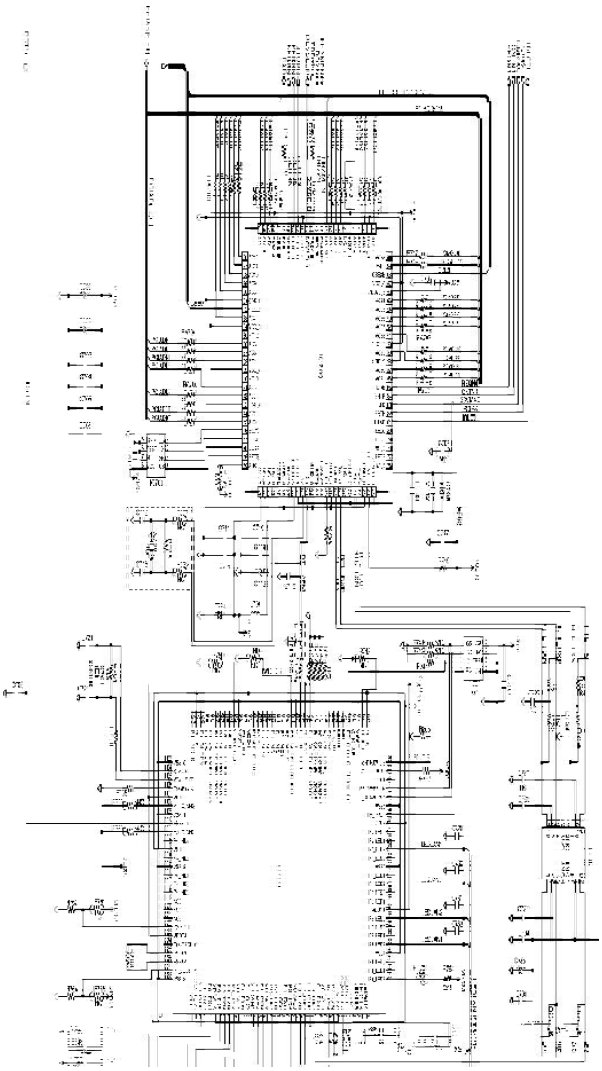
9.3. SD CARD BLOCK

The SD card controller (IC606) is connected to the main CPU (IC408) through a bus, is able to implement the physical layer specifications of the card, and performs read/write control for the SD card.
For using the SD card, it should be inserted into the card slot (CN601).



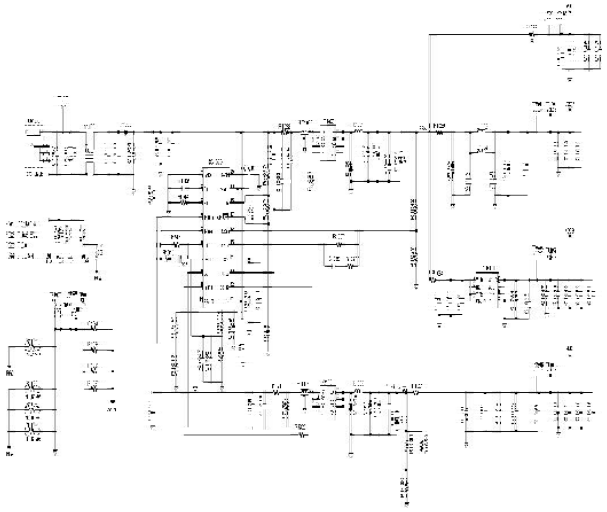
9.4. ETHER BLOCK

The transformer (T701) insulates the inside and the outside of the set.
The 4 port switch (IC703) has the switching HUB function in 10/100BASE-T specification, and perform data sending and receiving in Ethernet specification.
The Ether controller (IC700), which connects to the main CPU (IC408) through the PCI bus, converts the data from Ethernet specification to PCI bus specification.



9.5. POWER SUPPLY BLOCK

The output voltage DC12V of the AC adaptor is supplied to the TV adaptor through the DC jack (CN1000), and converted to about 3.3V and 1.5V by DC/DC converter (IC1000).
And then 3.3V is converted to about 2.5V by the regulator (IC1001).



9.6. RF BLOCK

- Antenna

It resonates the antenna at 2.45GHz, and operates at /4.
The CPU&MAC/BBIC (IC859) performs switches between the print antenna on the main board and retractable antenna as well as send/ receive switches by controlling the diversity switch (IC851).

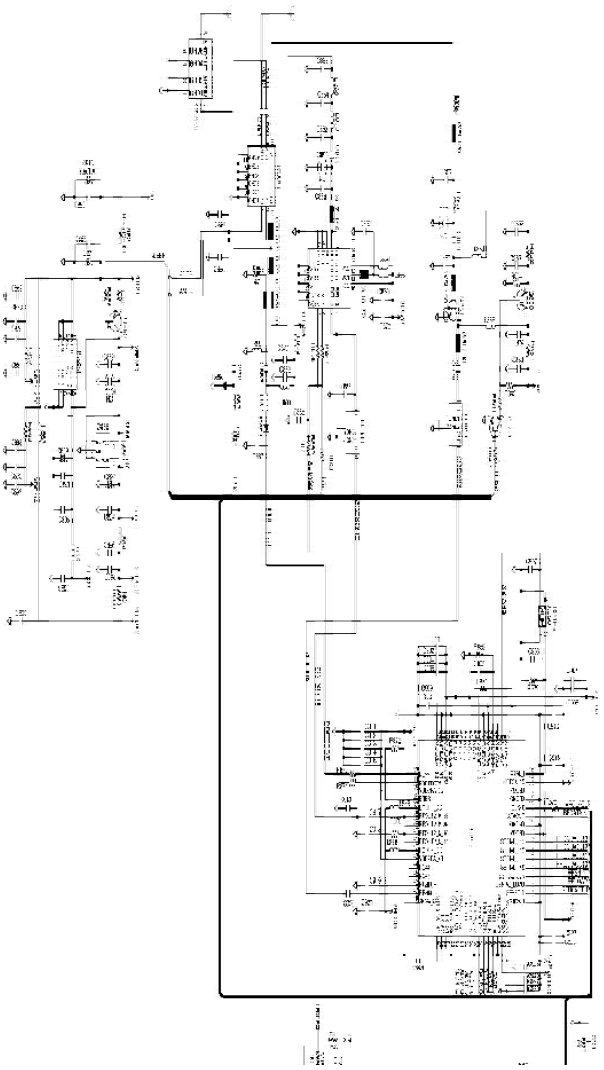
- Receive block

Receive signals from the antenna pass through the diversity switch (IC851), are amplified by the LNA (Low Noise Amp)(Q851), and input to the RFIC (IC857).
The RFIC (IC857) integrates a LNA (Low Noise Amp, LNA in the IC857), a mixer for frequency converter, and a synthesizer generating receive local signals.
In the RFIC (IC857), input signals are separated into the base band signals of In-Phase (RxI) and Quadrature (RxQ) and then output.
The base band signal is input to the CPU&MAC/BBIC (IC859) and A/D converted, and then the data replay is performed.

- Send block

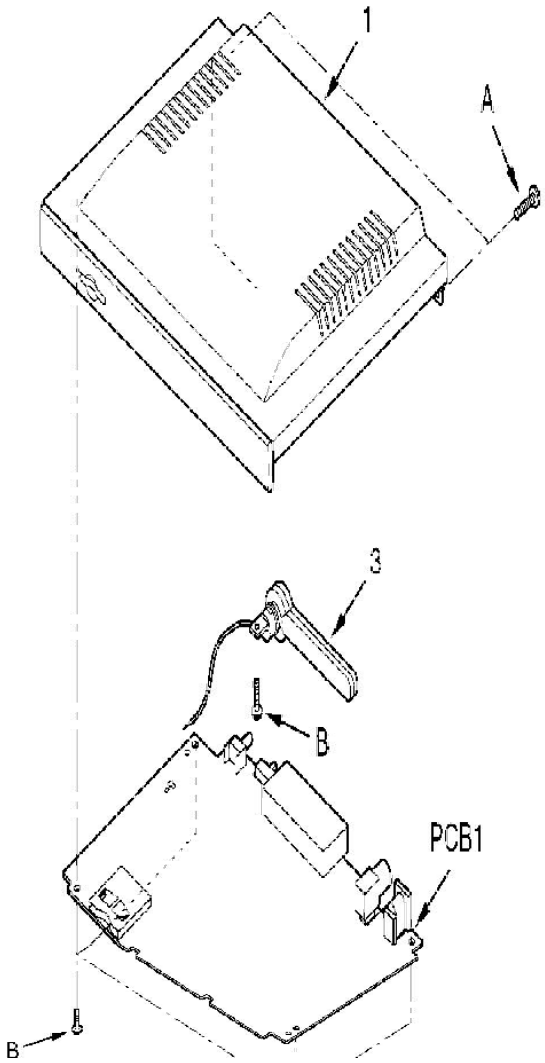
The data frame (data packet), which is generated in the MAC block integrated in the CPU&MAC/BBIC (IC859), is converted to the In-Phase (TxI) signal and Quadrature (TxQ) signal and input to the RFIC (IC857).
In the RFIC (IC857), it is converted to the RF signal at the send frequency band.

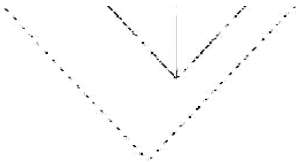
After that, it is sent from the antenna via the diversity switch (IC851) through several kinds of processing such as an impedance conversion, a level adjustment, a cut in unnecessary frequency components.
The RF signal amplified in the current amplification IC (IC852) is feedbacked through level detection.
Gain is adjusted within the RFIC (IC857) so that transmit output level is kept constant.



10. BLOCK DIAGRAM

11. CABINET AND ELECTRICAL PARTS LOCATION

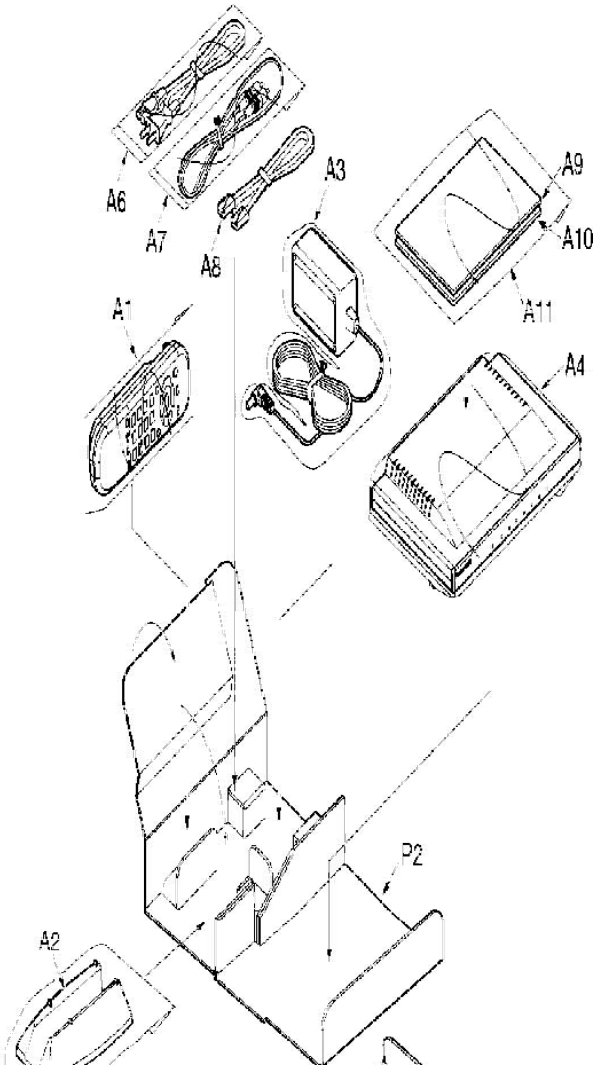

1
A
3
B
PCB1
B



SCREWS

Ref No.	Figure	Parts No.
(A)	ϕ26×10mm	PQHV2610PJ6J
(B)	ϕ26×8mm	XTW26+8PFJ7

12. ACCESSORIES AND PACKING MATERIALS


A6
A7
A8
A3
A9
A10
A11
A1
A4
P2
A2

13. REPLACEMENT PARTS LIST

Note:

1. **RTL (Retention Time Limited)**
   The marking (RTL) indicates that the Retention Time is limited for this item.
   After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability depends on the type of assembly and the laws governing parts and product retention. At the end of this period, the assembly will no longer be available.
2. **Important safety notice**
   Components identified by the ⚠ mark indicates special characteristics important for safety. When replacing any of these components, only use specified manufacture's parts.
3. **The S mark means the part is one of some identical parts. For that reason, it may be different from the installed part.**
4. **ISO code (Example: ABS-94HB) of the remarks column shows quality of the material and a flame resisting grade about plastics.**
5. **RESISTORS & CAPACITORS**
   Unless otherwise specified;
   All resistors are in ohms (Ω), k=1000 , M=1000k
   All capacitors are in MICRO FARADS (F), p= (F)
   ***Type & Wattage of Resistor**

13.1. CABINET AND ELECTRICAL PARTS

Ref. No.	Part No.	Part Name & Description	Remarks
1	PSYMWV10A	CABINET BODY	PS-V0
2	PSYFWV10A	CABINET COVER	PS-V0
2-1	PSHA1016Z	RUBBER PARTS,LEGS	
3	PSSA1028Y	ANTENNA	
4	PSGT2679Z	NAME PLATE	
PCB1	PSWPWV10A	MAIN BOARD ASSY	

13.2. ACCESSORIES AND PACKING MATERIALS

Ref. No.	Part No.	Part Name & Description	Remarks
A1	PSWEWV10A	REMOTE CONTROLLER	
A2	PSYLWV10A	STAND	ABS-V0
A3	PQLV202Y	AC ADAPTOR	
A4	XZB25X34A04	PROTECTION COVER(FOR SET)	
A5	XZB10X20A04	PROTECTION COVER(FOR STAND)	
A6	PSJA1069Z	POWER CORD	
A7	PSJP01R02Z	PLUG,VIDEO CABLE	
A8	PQJA10138Z	CORD,ETHERNET CABLE	
A9	PSQX3749Z	INSTRUCTION BOOK(OPERATING INSTRUCTIONS)	
A10	PSQX3750Z	INSTRUCTION BOOK(SETUP GUIDE)	
A11	XZB20X30A05	PROTECTION COVER(FOR MANUAL)	
P1	PSPK2337Z	GIFT BOX	
P2	PSPD1276Z	CUSHION	

14. FOR THE SCHEMATIC DIAGRAM

Note:

1. DC voltage measurements are taken with an oscilloscope or a tester with a ground.
2. The schematic diagrams and circuit board may be modified at any time with the development of new technology.

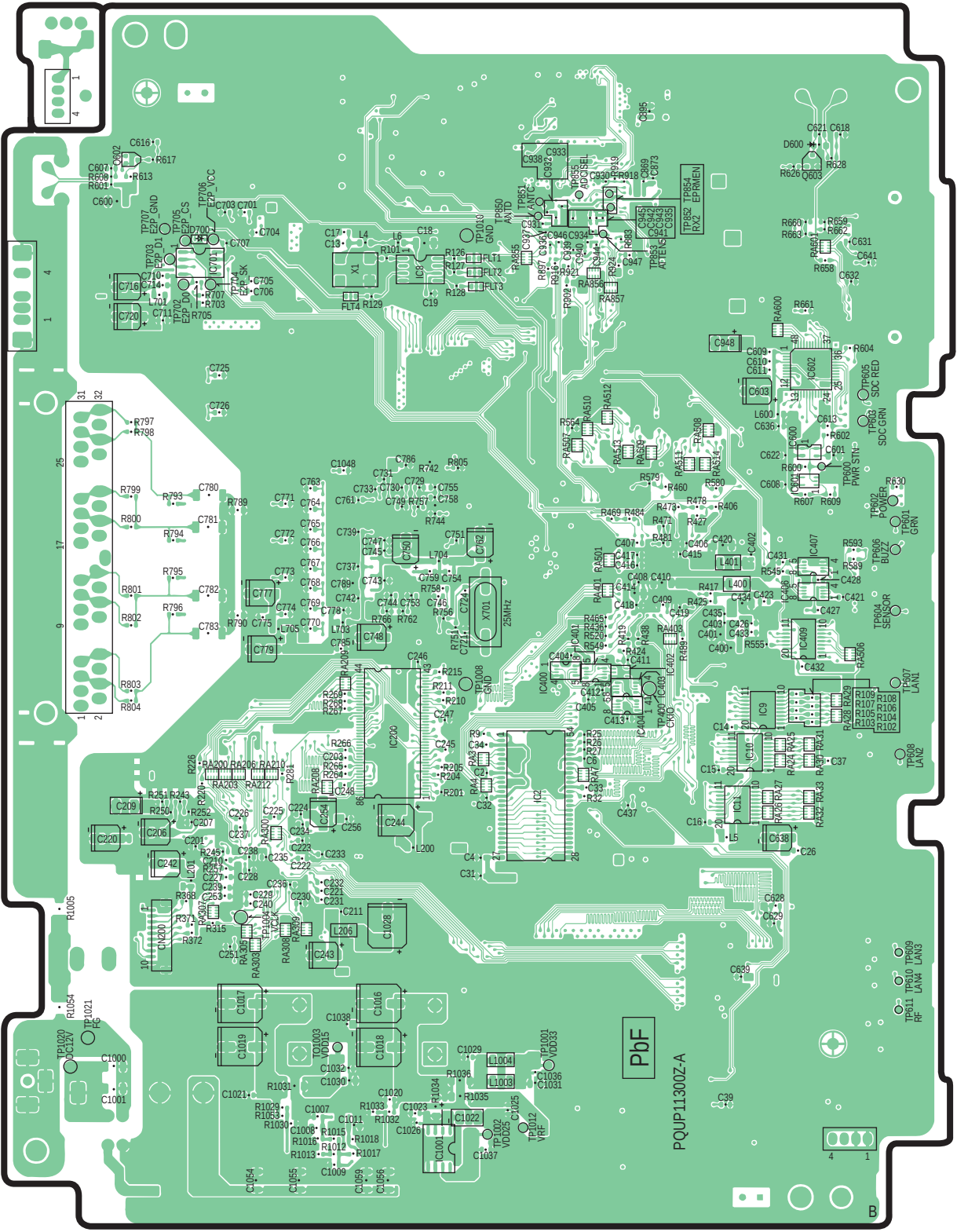
15. SCHEMATIC DIAGRAM

16. CIRCUIT BOARD

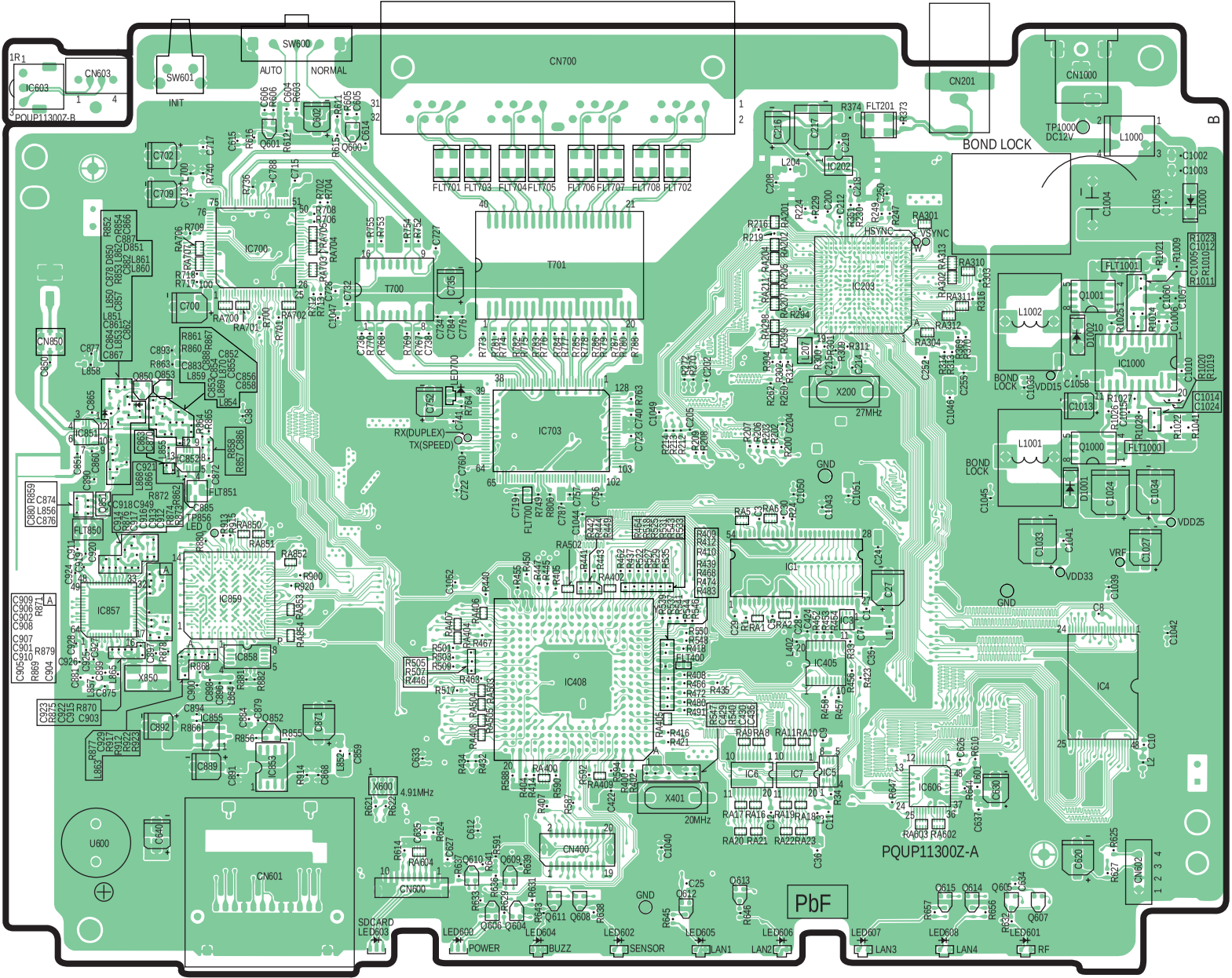
16.1. COMPONENT VIEW

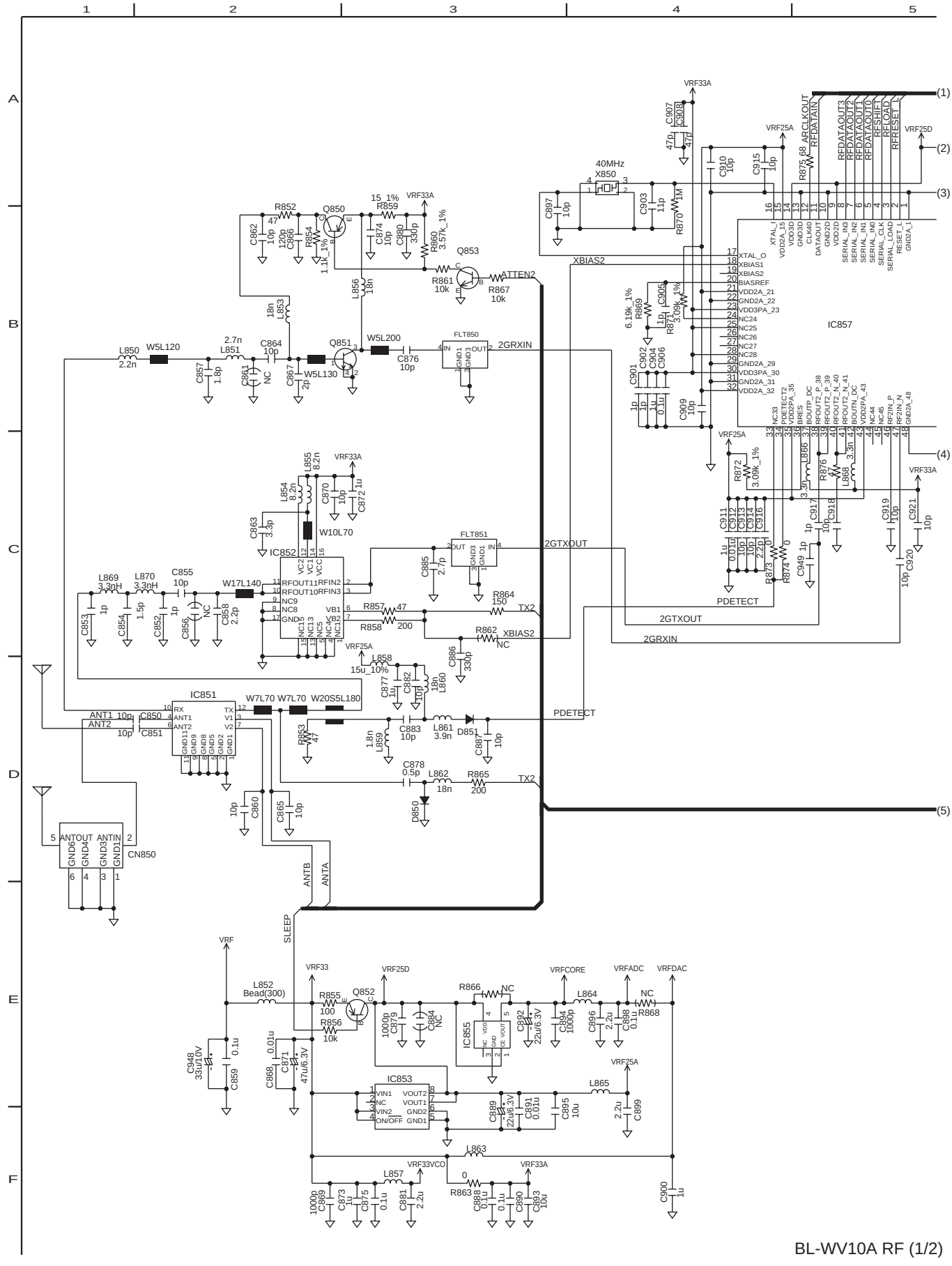
16.2. BOTTOM VIEW

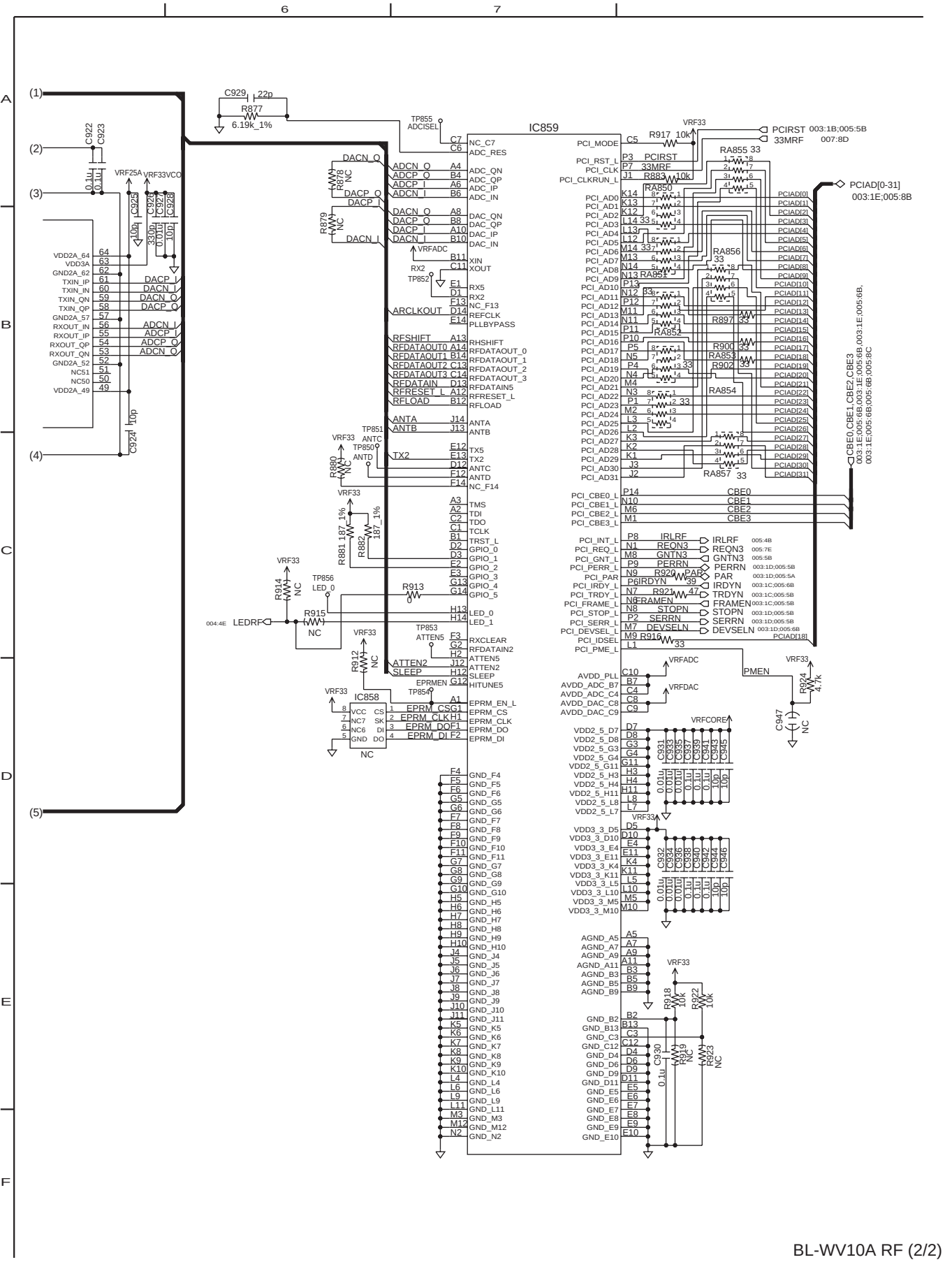
A BL-WV10A



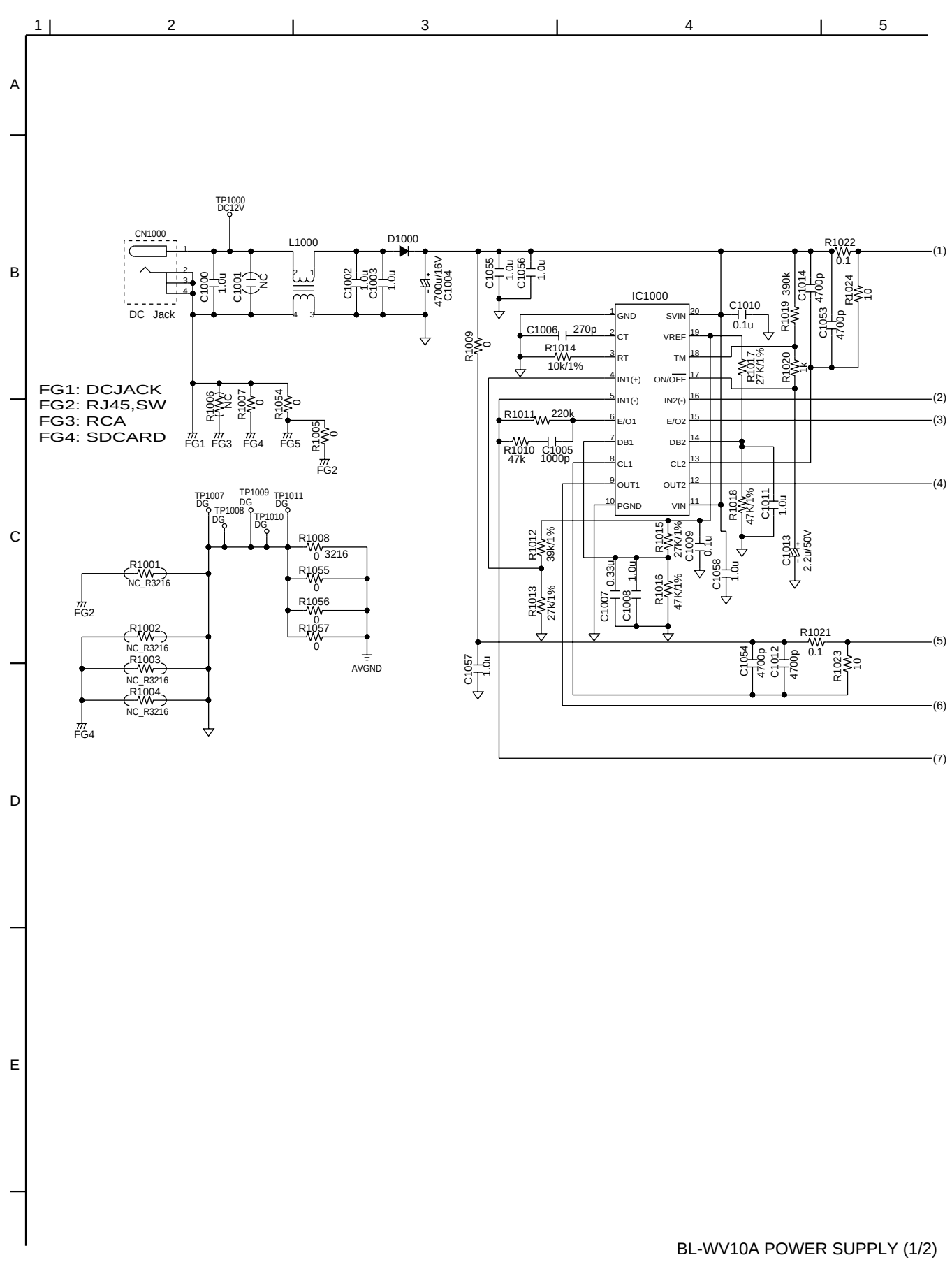
BL-WV10A MAIN BOARD BOTTOM VIEW


BL-WV10A MAIN BOARD COMPONENT VIEW
PQUP11300Z-A
PbF
BOND LOCK
SW600
SW601
CN700
CN201
CN1000
CN603
CN850
CN601
CN600
CN400
CN302
IC703
IC857
IC859
IC858
IC892
IC852
IC851
IC1
IC4
IC202
IC203
IC405
IC408
IC606
IC6
IC7
IC5
X200
27MHz
X401
20MHz
X600
4.91MHz
X850
T700
T701
FLT701
FLT703
FLT704
FLT705
FLT706
FLT707
FLT708
FLT702
FLT201
FLT1000
FLT1001
FLT851
FLT850
TP1000
DC12V
L1000
L1001
L1002
L204
RX(DUPLEX)
TX(SPEED)
HSYNC
VSYNC
VDD15
VDD25
VDD33
VRF
GND
INIT
AUTO
NORMAL
SDCARD
LED603
LED600
LED604
LED602
LED605
LED606
LED607
LED608
LED601
POWER
BUZZ
SENSOR
LAN1
LAN2
LAN3
LAN4
RF

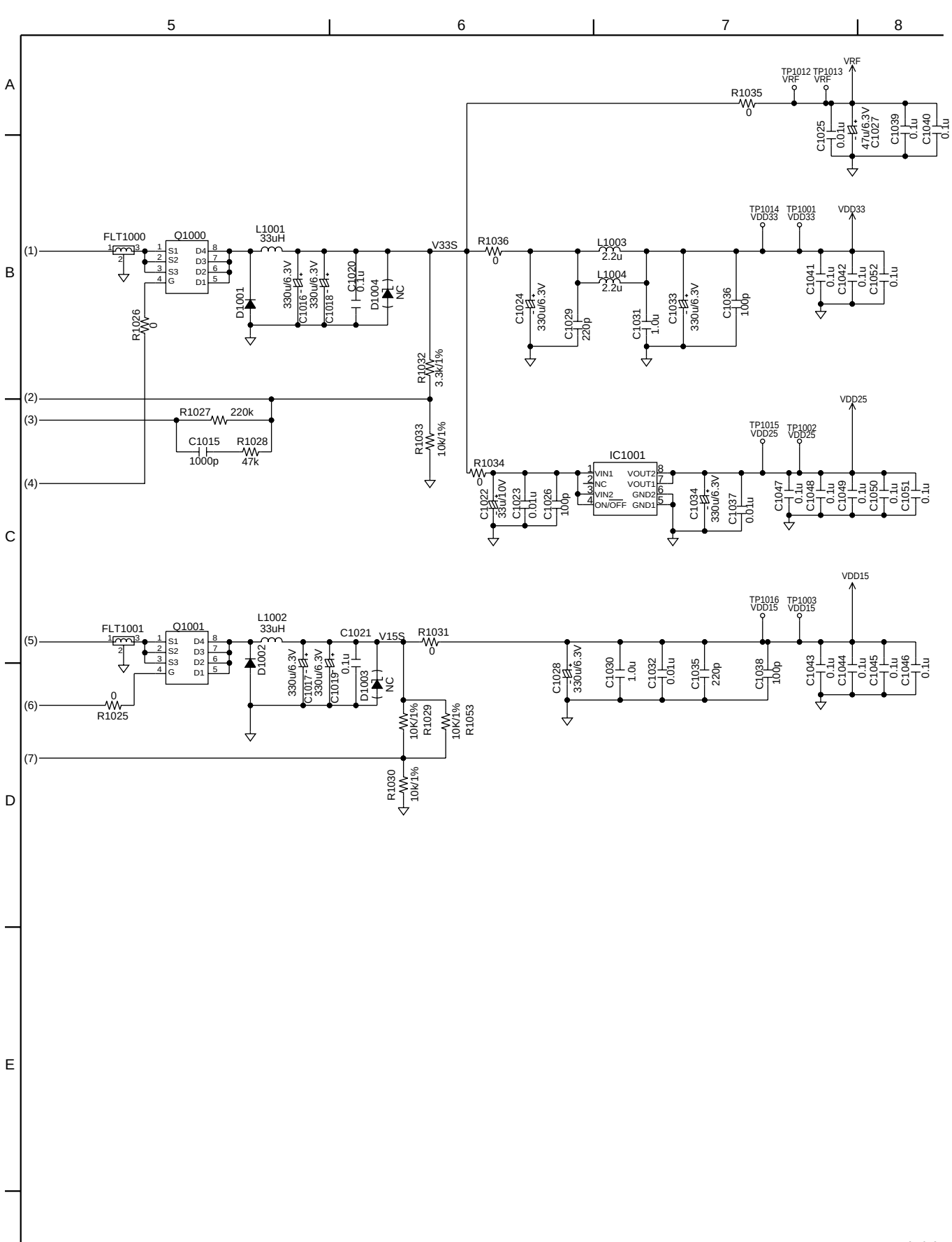

IC857
IC852
IC851
IC853
Q850
Q851
Q852
Q853
X850
40MHz
CN850
VRF33A
VRF25A
VRF25D
VRFCORE
VRFADC
VRFDAC
VRF33VCO
VRF
W5L120
W5L130
W5L200
W10L70
W17L140
W7L70
W20S5L180
FLT850
FLT851
2GRXIN
2GTXOUT
PDETECT
XBIAS2
ATTEN2
TX2
ANTA
ANTB
SLEEP
ANT1
ANT2
ANTOUT
ANTIN
RFDATAOUT3
RFDATAOUT2
RFDATAOUT1
RFDATAOUT0
RFSHIFT
RFLOAD
RFRESET_L
ARCLKOUT
RFDATAIN
BL-WV10A RF (1/2)



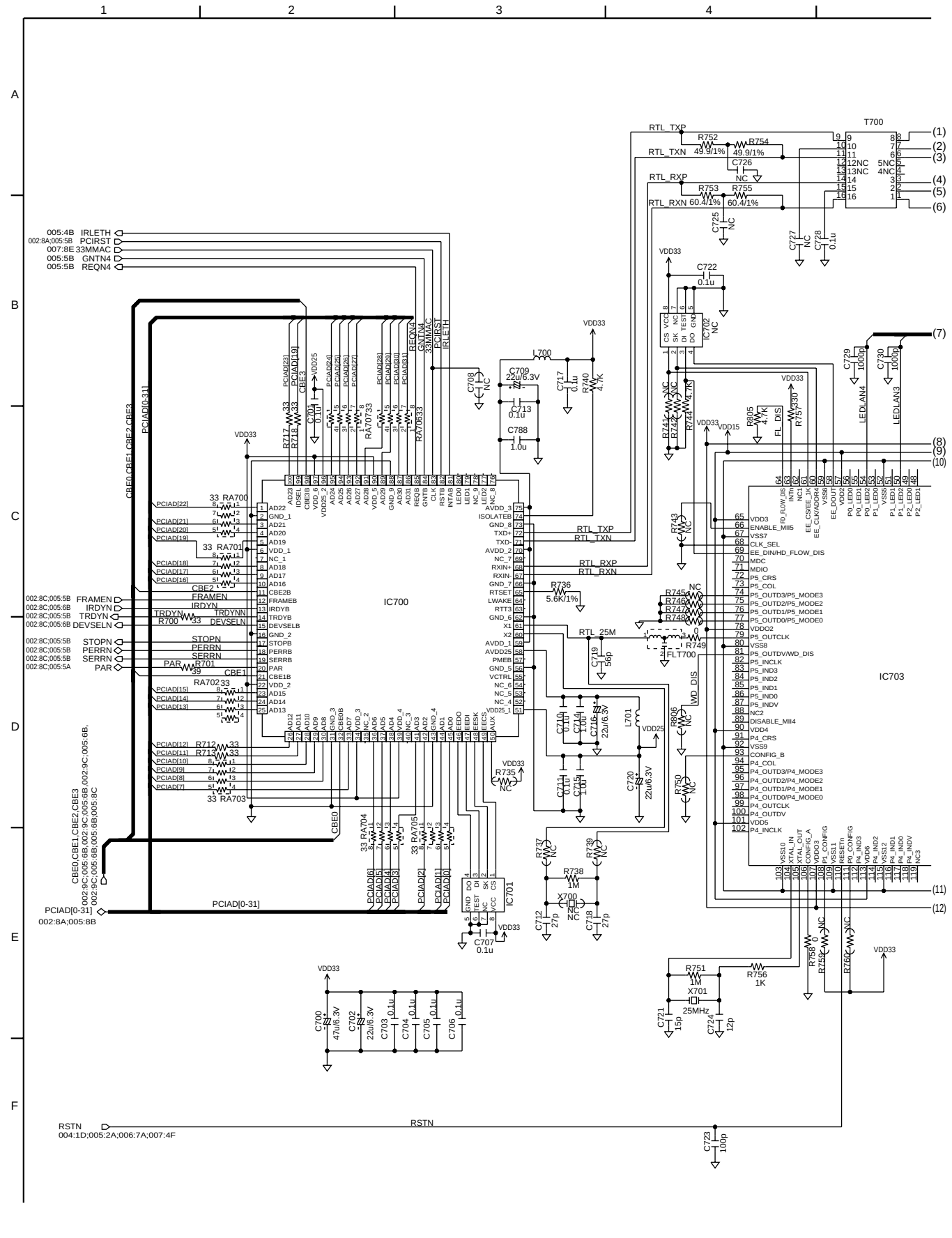
BL-WV10A RF (2/2)



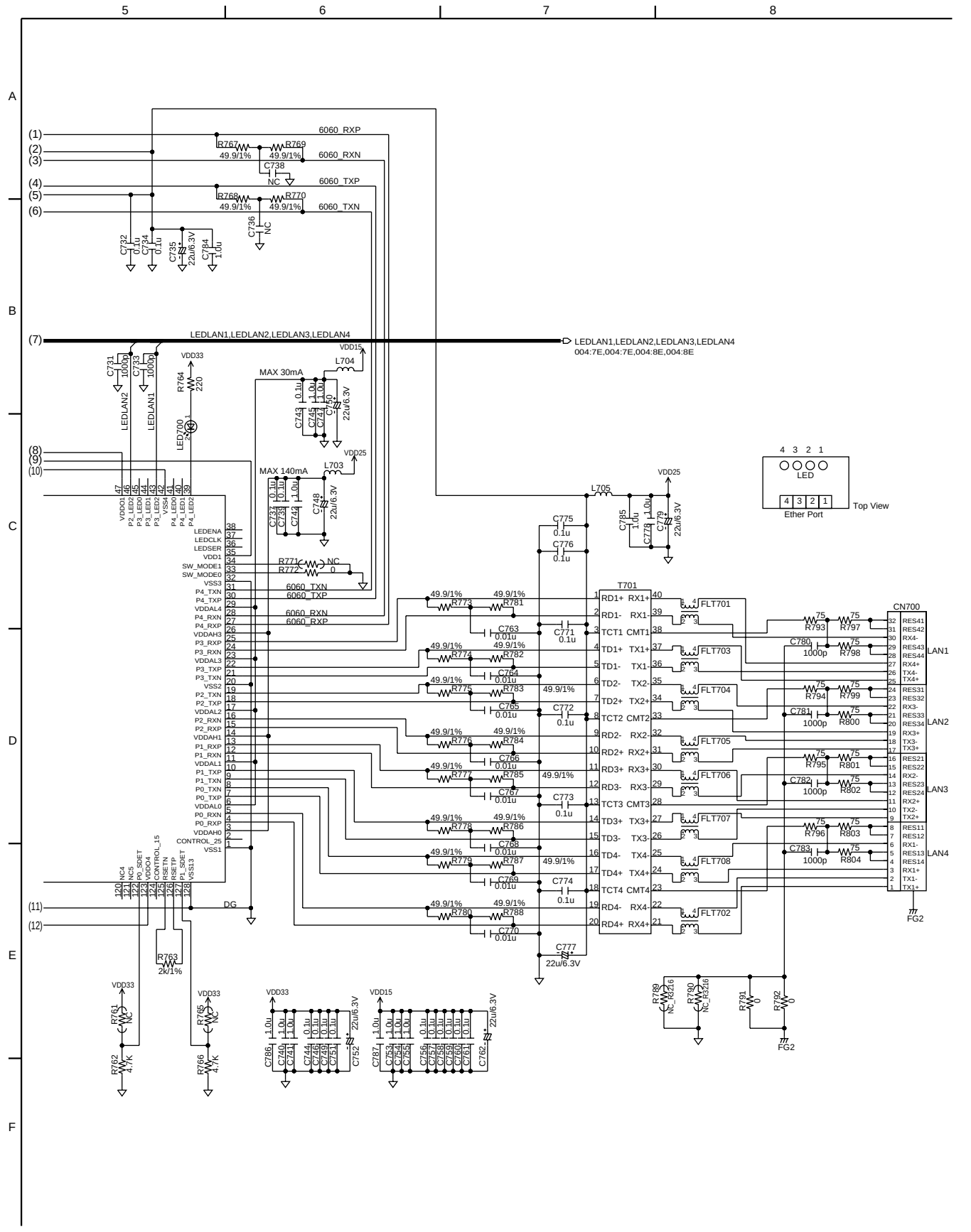
BL-WV10A POWER SUPPLY (1/2)

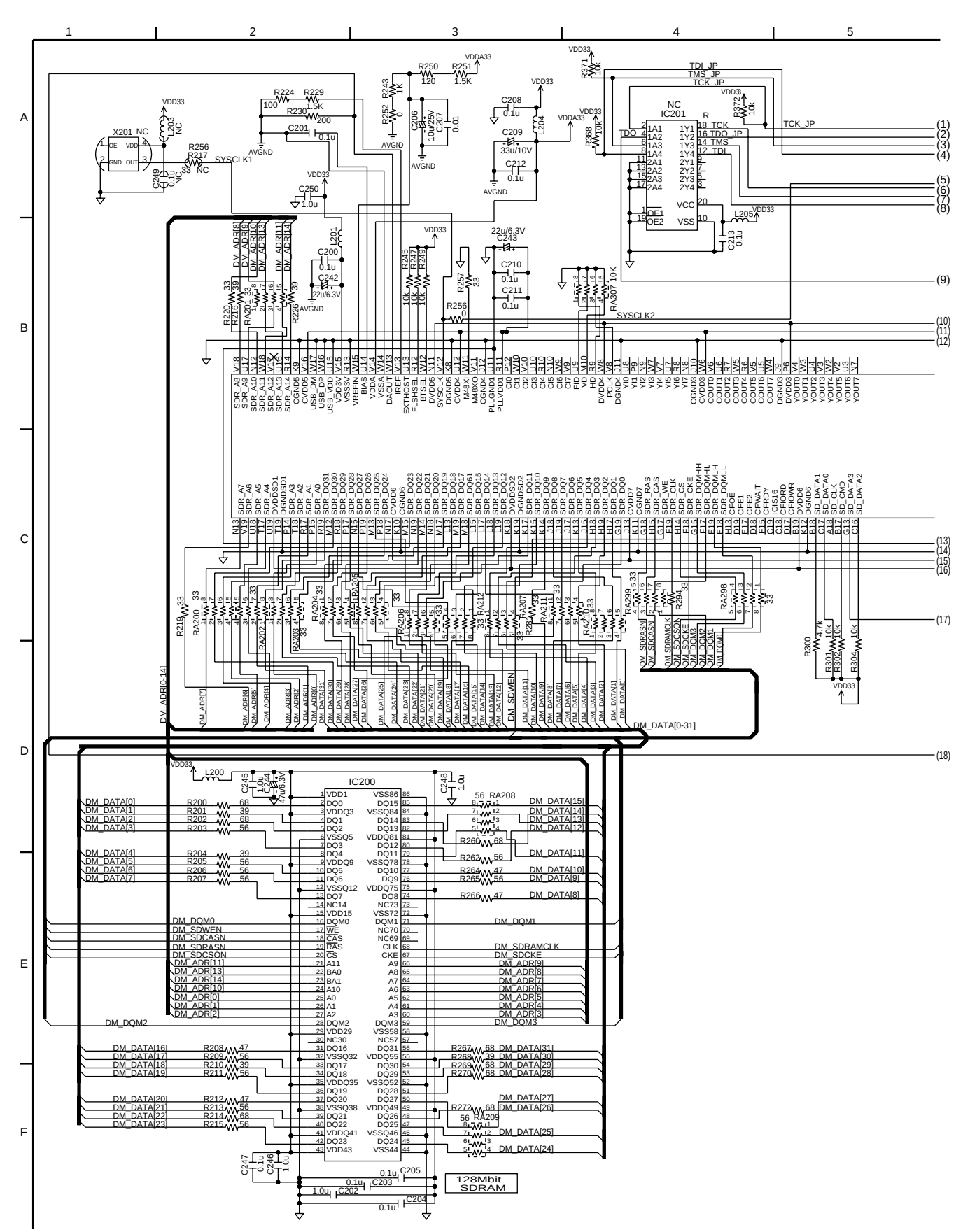


BL-WV10A POWER SUPPLY (2/2)

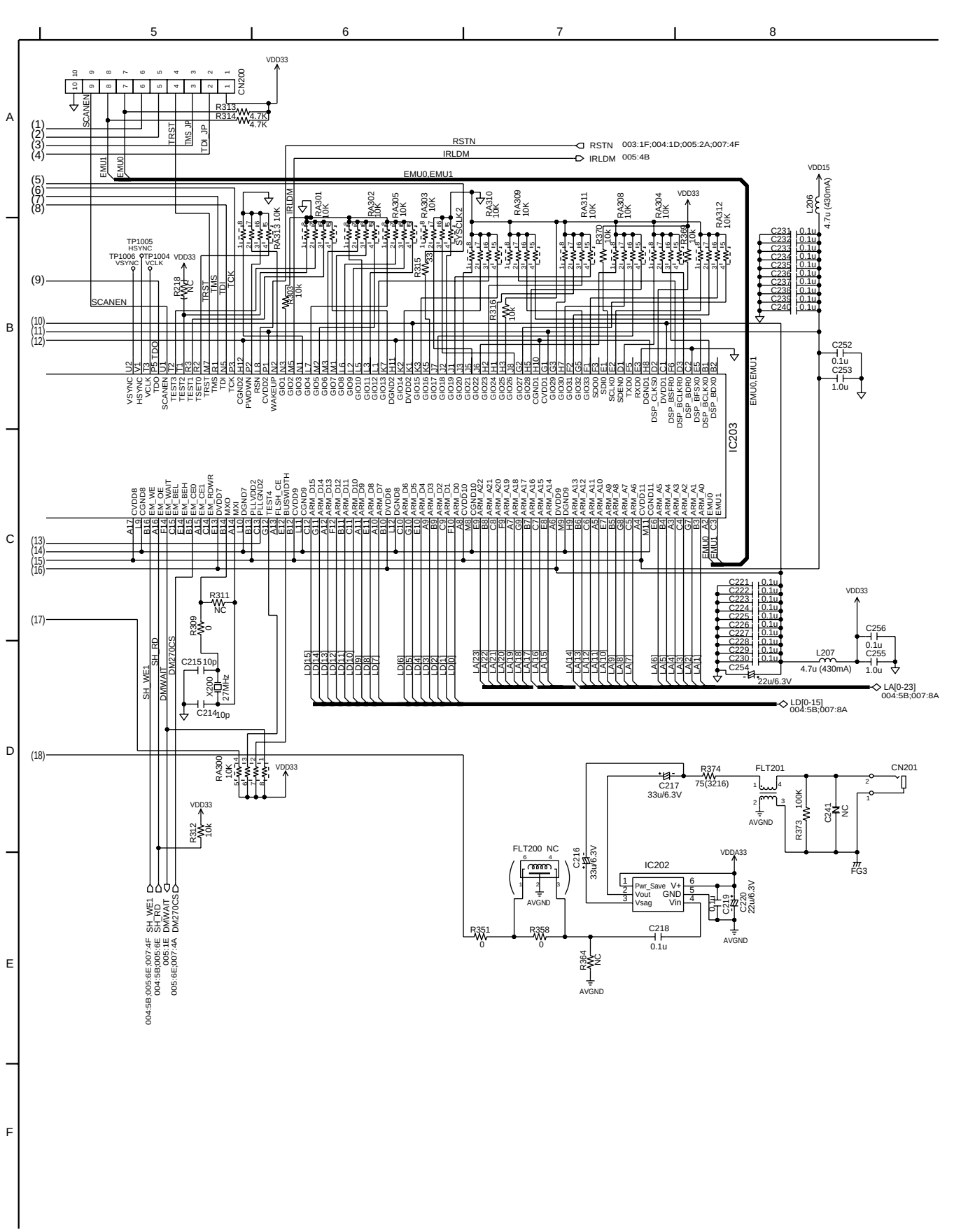


BL-WV10A ETHER (1/2)

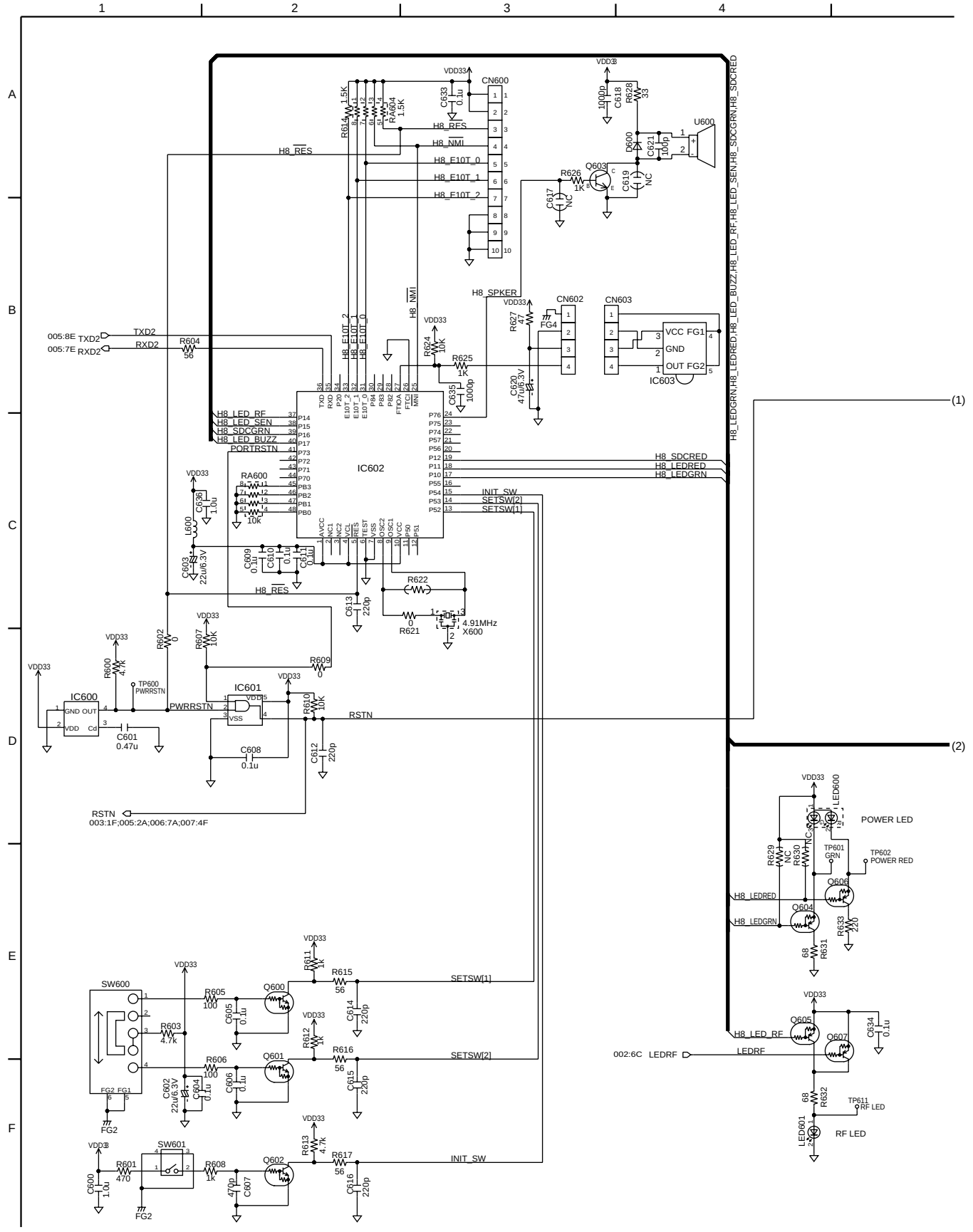

6060_RXP
6060_RXN
6060_TXP
6060_TXN
LEDLAN1,LEDLAN2,LEDLAN3,LEDLAN4
LEDLAN1,LEDLAN2,LEDLAN3,LEDLAN4
004:7E,004:7E,004:8E,004:8E
MAX 30mA
MAX 140mA
VDD33
VDD15
VDD25
L704
L703
L705
T701
CN700
LED
Ether Port
Top View
LAN1
LAN2
LAN3
LAN4
FG2
DG

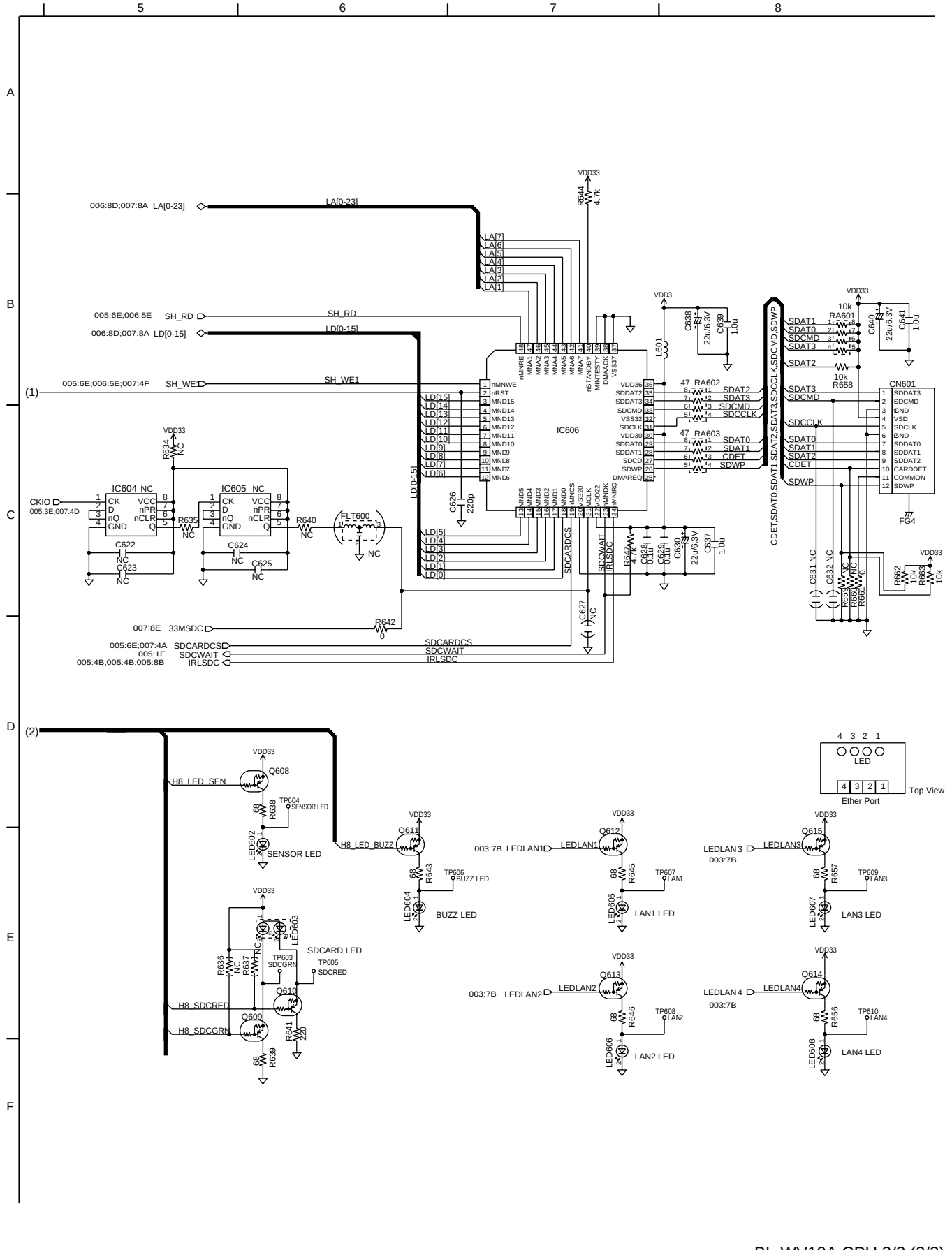


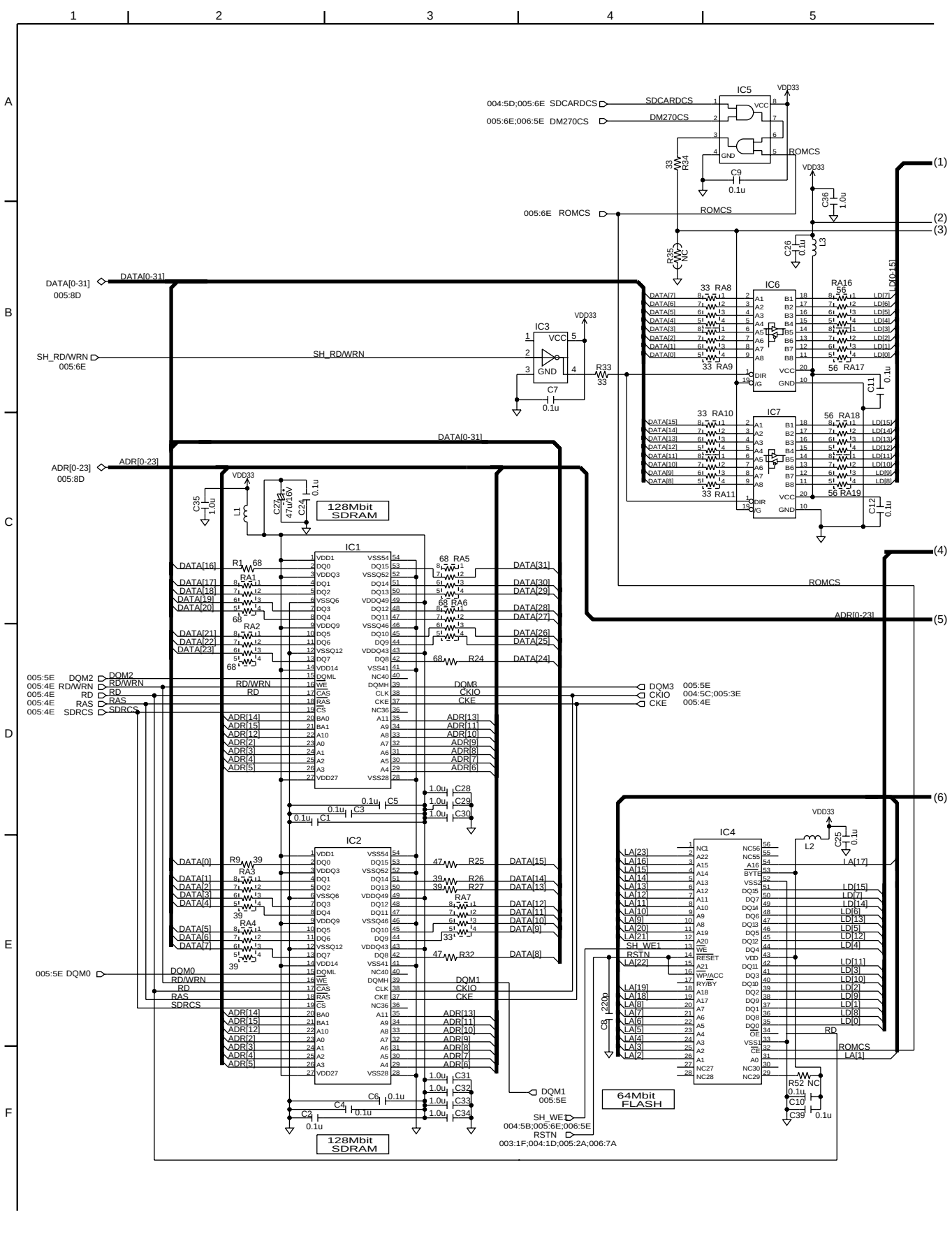
BL-WV10A DSP (1/2)

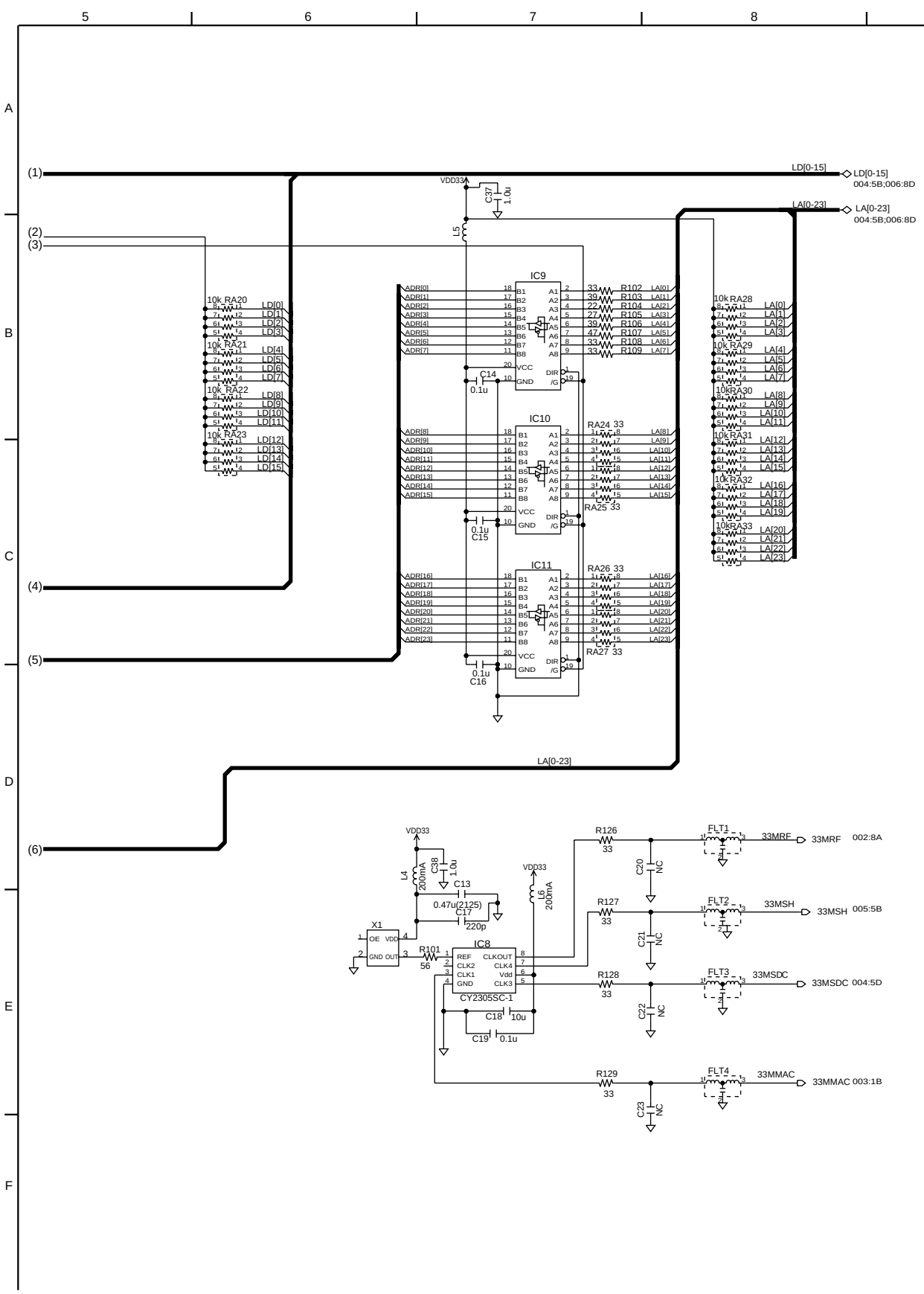


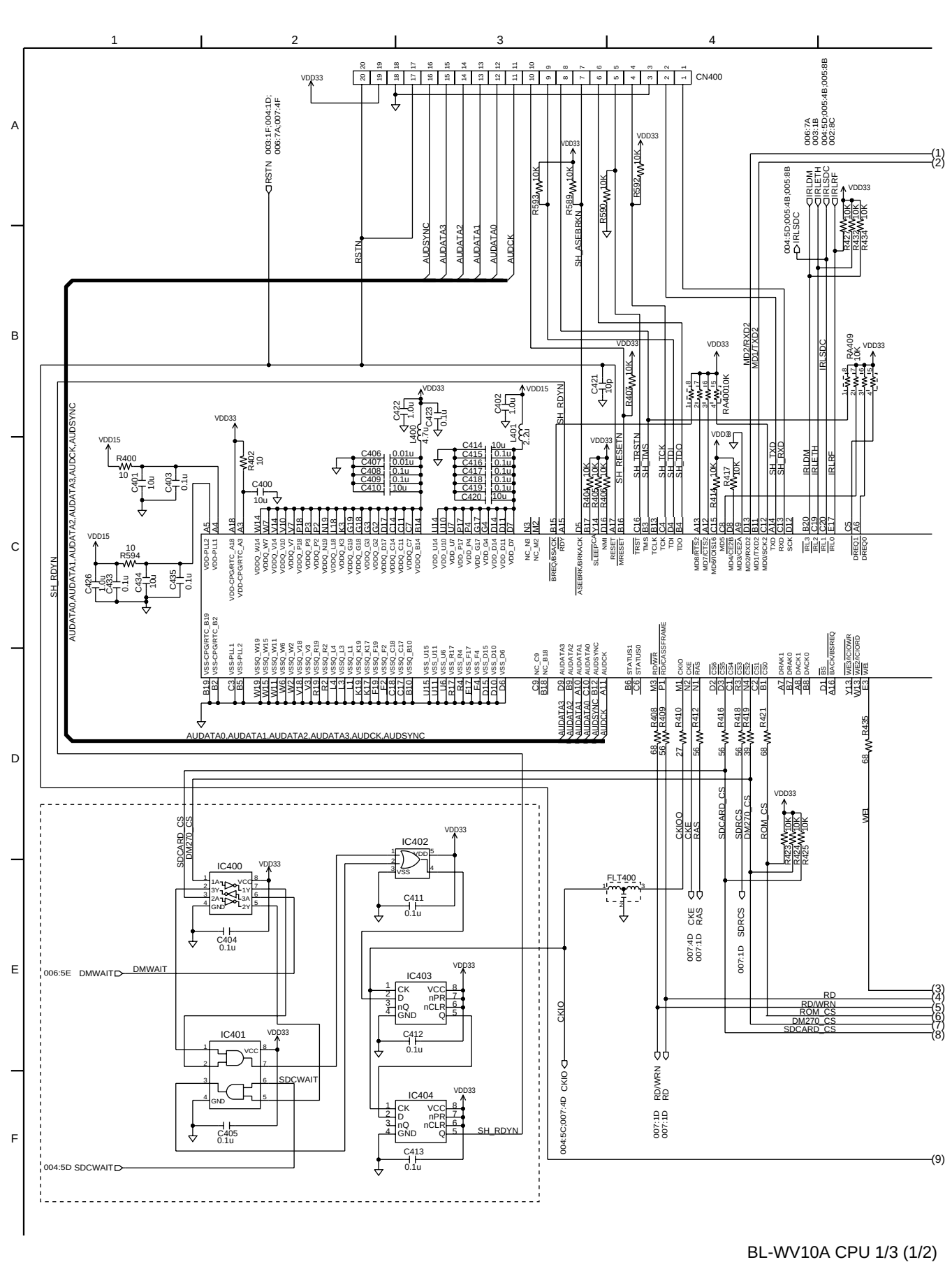
BL-WV10A DSP (2/2)


CN600
IC602
IC603
IC600
IC601
CN602
CN603
U600
Q600
Q601
Q602
Q603
Q604
Q605
Q606
Q607
SW600
SW601
RA600
RA604
X600
H8_RES
H8_NMI
H8_SPKER
H8_E10T_0
H8_E10T_1
H8_E10T_2
H8_LED_RF
H8_LED_SEN
H8_SDCGRN
H8_LED_BUZZ
PORTRSTN
H8_SDCRED
H8_LEDRED
H8_LEDGRN
INIT_SW
SETSW[2]
SETSW[1]
TXD2
RXD2
PWRRSTN
RSTN
LEDRF
VCC FG1
GND
OUT FG2
POWER LED
RF LED
TP600 PWRRSTN
TP601 GRN
TP602 POWER RED
TP611 RF LED
4.91MHz
005:8E TXD2
005:7E RXD2
003:1F;005:2A;006:7A;007:4F
002:6C LEDRF
H8_LEDGRN,H8_LEDRED,H8_LED_BUZZ,H8_LED_RF,H8_LED_SEN,H8_SDCGRN,H8_SDCRED
(1)
(2)
BL-WV10A CPU 3/3 (1/2)

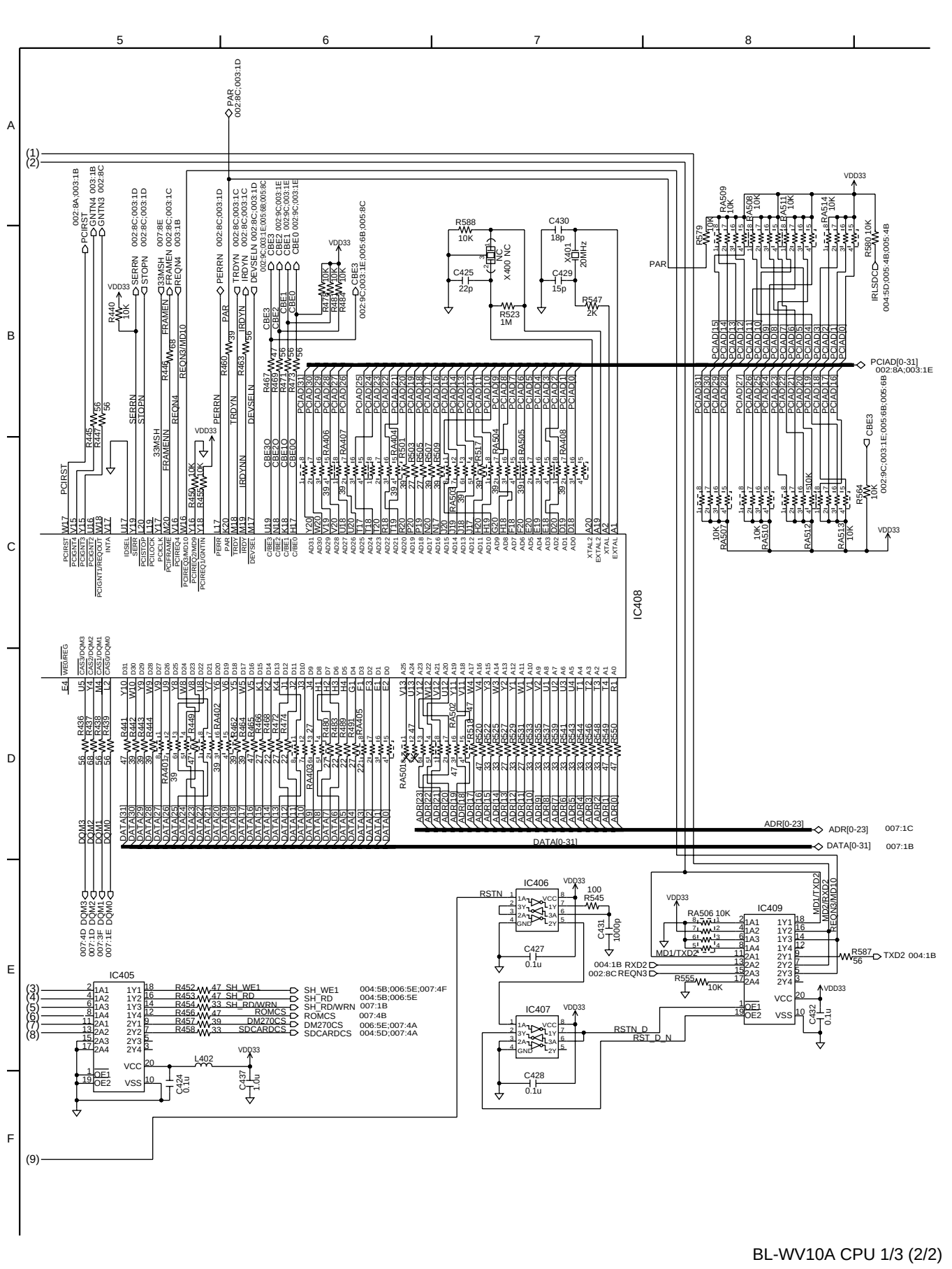

006:8D;007:8A LA[0-23]
LA[0-23]
005:6E;006:5E SH_RD
SH_RD
006:8D;007:8A LD[0-15]
LD[0-15]
005:6E;006:5E;007:4F SH_WE
SH_WE1
IC606
IC604 NC
IC605 NC
CKIO
005:3E;007:4D
FLT600
007:8E 33MSDC
005:6E;007:4A SDCARDCS
005:1F SDCWAIT
005:4B;005:4B;005:8B IRLSDC
SDCARDCS
SDCWAIT
IRLSDC
CDET,SDAT0,SDAT1,SDAT2,SDAT3,SDCCLK,SDCMD,SDWP
CN601
FG4
RA601
RA602
RA603
003:7B LEDLAN1
003:7B LEDLAN2
LEDLAN3
003:7B
LEDLAN4
003:7B
H8_LED_SEN
H8_LED_BUZZ
H8_SDCRED
H8_SDCGRN
SENSOR LED
BUZZ LED
LAN1 LED
LAN2 LED
LAN3 LED
LAN4 LED
SDCARD LED
LED
Ether Port
Top View


004:5D;005:6E SDCARDCS
005:6E;006:5E DM270CS
SDCARDCS
DM270CS
IC5
VCC
GND
ROMCS
VDD33
33 R34
C9 0.1u
C36 1.0u
005:6E ROMCS
R35 NC
C26 0.1u
L3
(1)
(2)
(3)
DATA[0-31]
005:8D
SH_RD/WRN
005:6E
IC3
C7 0.1u
R33 33
IC6
IC7
33 RA8
33 RA9
33 RA10
33 RA11
RA16 56
56 RA17
56 RA18
56 RA19
DIR
I/G
C11 0.1u
C12 0.1u
LD[0-15]
ADR[0-23]
005:8D
128Mbit SDRAM
IC1
C35 1.0u
L1
C27 47u/16V
C24 0.1u
68 RA5
68 RA6
R24 68
R1 68
RA1
RA2
RA3
RA4
RA7
DQM2
RD/WRN
RD
RAS
SDRCS
005:5E
005:4E
DQM3 005:5E
CKIO 004:5C;005:3E
CKE 005:4E
C28 1.0u
C5 0.1u
C29 1.0u
C3 0.1u
C30 1.0u
C1 0.1u
IC2
R9 39
R25 47
R26 39
R27 39
R32 47
DQM0
DQM1
005:5E DQM0
005:5E DQM1
C31 1.0u
C32 1.0u
C6 0.1u
C33 1.0u
C4
C34 1.0u
C2 0.1u
0.1u
128Mbit SDRAM
(4)
(5)
(6)
IC4
L2
C25 0.1u
64Mbit FLASH
C8 220p
R52 NC
C10 0.1u
C39 0.1u
SH_WE
004:5B;005:6E;006:5E
RSTN
003:1F;004:1D;005:2A;006:7A

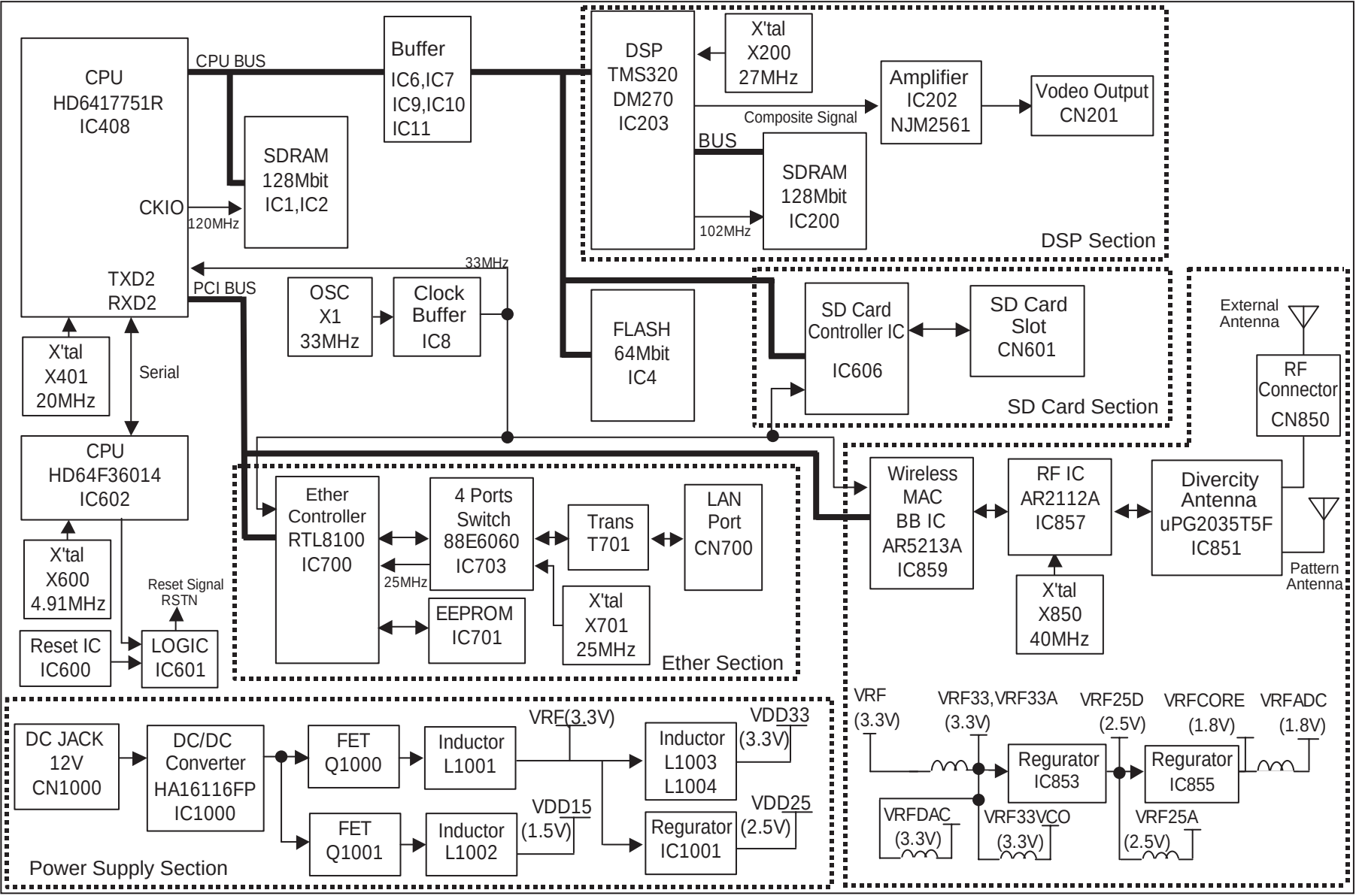

LD[0-15]
LD[0-15] 004:5B;006:8D
LA[0-23]
LA[0-23] 004:5B;006:8D
VDD33
C37 1.0u
L5
IC9
IC10
IC11
RA24 33
RA25 33
RA26 33
RA27 33
C14 0.1u
C15 0.1u
C16 0.1u
10k RA20
10k RA21
10k RA22
10k RA23
10k RA28
10k RA29
10k RA30
10k RA31
10k RA32
10k RA33
R102 R103 R104 R105 R106 R107 R108 R109
R126 R127 R128 R129
33
FLT1 FLT2 FLT3 FLT4
33MRF 33MRF 002:8A
33MSH 33MSH 005:5B
33MSDC 33MSDC 004:5D
33MMAC 33MMAC 003:1B
L4 200mA
C38 1.0u
C13 0.47u(2125)
C17 220p
L6 200mA
X1
R101 56
IC8
CY2305SC-1
C18 10u
C19 0.1u
C20 NC
C21 NC
C22 NC
C23 NC



BL-WV10A CPU 1/3 (1/2)



BL-WV10A CPU 1/3 (2/2)



BL-WV10A BLOCK DIAGRAM